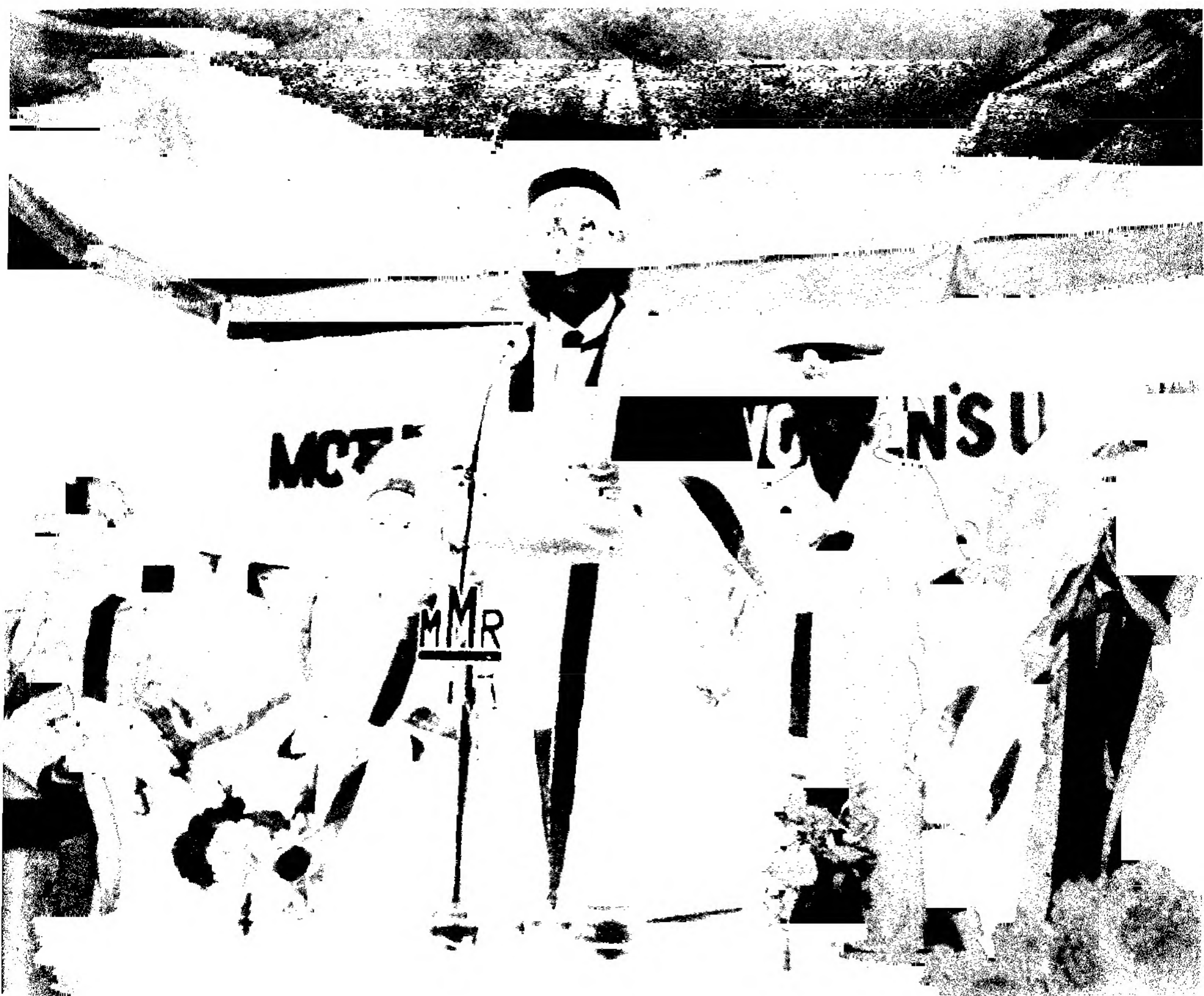


# University News

MONDAY, OCTOBER 3, 1988

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Dr. P.C. Alexander, Governor of Tamil Nadu and Chancellor, speaking at the Convocation of the Mother Teresa Women's University. Seated from L to R are Dr. (Mrs.) Jaya Kothai Pillai, Vice-Chancellor, Thiru A. Padmanabhan, Pro-Chancellor and Shri Abid Hussain, Member, Planning Commission, who delivered the Convocation Address.

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# UNIVERSITY NEWS

# THE INDIAN MIND

Umrao Singh Chaudhari\*

In his recent book *Gods & Politicians*, Bruce Grant, Ex. High Commissioner of Australia in New Delhi, observes: "India is a place from which no traveller returns unchanged.....of the countries I know well India is the most sensual. It is the evocation of things seen, heard, touched, tasted and smelled, rather than intellectual recall, that enables me how best to remember it.....It is an experience, an idea, a word meaning, many things to many people." India is one of the few countries of the world which has a very ancient culture and civilization. It is distinctive for its antiquity and continuity. Apart from its own vitality, the continuity of India is largely due to its ability to adapt to alien ideas without losing its own identity. Her constant contact with the outside world also gave India the opportunity to contribute to other civilizations.

Every country has its own uniqueness and individuality which is mirrored in its academic, social and cultural life and pursuits. This can be termed as its 'mind' or 'collective consciousness' which determines attitudes and directs the gesture of its people. While India never lost sight of the necessity of the material and intellectual aspect of life, she laid a particular emphasis on the moral and spiritual aspect. This spiritual dimension was non-existent in other countries until two thousand years ago, and then it developed only as an adjunct of religious dogmatism attached to a particular prophet and his set of religious tenets.

Spiritualism in India meant a dedication of one's life to the perfection of soul or self-realization. Of all the countries of the world, India alone, with all the hypocrisy and cant attributed to it by some foreign and even Indian writers, justifiably or otherwise, allows and even encourages search and research in the spiritual field as a worthy whole time profession. The Indian philosophical tradition, from the period of Vedas up to the modern time, presents a glorious record of reflection on man's nature and his destiny.

Indian civilization is essentially religious. It is engaged in a continuous and sincere pursuit of the sacred. People of India have strong sense of individuality and at the same time, a sense of society at large which enables them to think in terms of the common interests of groups and classes. The caste and guild system, the nightmare of all governments for their clannishness and economic power, stem from this ability to congregate. Spread over a huge geographical area, 'Indianism' that is the essence of a polymorphous culture, is difficult to define. It acquires different postures and modes according to taste, attitudes and mental sets of different groups and people united by a typical acceptance of certain constant social and cultural factors, such as the caste system, the belief in the cycle of successive lives, and a sense of nationhood.

Those who have read the accounts of early English travellers to India, came to believe that the Hindus were like a 'Fiendish race' or 'a lesser breed without law'. Reputed indologists, like J.Z. Holwell, Alexander Dow, N.B. Halhed, Charles Wilkins, Max Mueller, William

Reader, Department of Education,  
Devi Ahilya Vishwavidyalaya, Indore.

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Editor:  
SUTINDER SINGH



Jones and scores of others, however, proved that such a belief was wrong. Max Mueller remarked : "If, I were asked under what human sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life, and has found solutions of some of them which will deserve the attention even of those who have studied Plato & Kant—I would point to India".

Deterioration of Indian art, culture and thought started with the decline of Gupta Period (500 A.D.), which is known as, the 'Golden Age' of India. Most of the energy and imagination of Indians was dissipated in maintaining the purity of their blood by imposing certain restrictions on the intermingling of the people of alien races. This attitude was further reinforced by various rituals, caste consciousness and untouchability.

In medieval India, the intellectual life was embodied in the teaching of Hindu and Muslim mystic saints. Most of them denounced idolatry, caste system and untouchability. They also condemned polytheism and believed in one God. Seventeenth Century marked the period of Climax of India's medieval feudal culture. At the beginning of the 18th century the Mughal structure began to crumble. The Britishers took the fullest advantage of the weakness and follies of the Indian feudal rulers—Hindu and Muslim alike. Thus, another era of oppression started from 1857 onwards.

From the last decade of medieval period to the beginning of the modern times, Indian thought is found to be in the grip of darkness. No notable progress in the realm of thinking was noticeable at this time. Political subjugation brought all round demoralization to Indians. The English education in India, as introduced by British rule, influenced the minds of educated men to a great extent. They became great admirers of every thing western and in course of time came to develop an attitude of contempt and inferiority complex towards the great religious and cultural traditions of their own country. This was the first time, perhaps, that the Indian mind was thrown off its balance. Even the muslim invasions and conquests had not produced a result of this kind. Indian scholars took great interest either in elaborating western concepts or in getting endorsement of their ideas in western literature. This 'dependence proneness' or follower syndrome' of Indians increased so much that their own reasoning ability and creativity were blunted and stifled. As Shils (1960) has pointed out, the effectiveness and productivity of Indian intellectuals

got more restricted than their capacities made it necessary.

The architects of 19th century renaissance reinterpreted the religious scriptures and made vigorous efforts at synthesizing tradition and modernity. Raja Ram Mohun Roy (1772-1833), the father of Indian recovery and first modern man in India, powerfully pleaded that he was not opposed to Brahminism in its original form, but to a perversion of it. The greatest contribution of the 20th century Indian thinkers is that they gave social content to the spiritual tradition. They took an integral and all comprehensive view of life and existence. The great idealistic tradition of the west and the christian ideal of love and social service found expression in their writings. Unlike the 19th century reformers, the 20th century thinkers have made tremendous impact on the entire Indian Society. It is fast shedding its rigidity, 'holier than thou' attitude and traditional approach to deliverence. Tagore has beautifully expressed this in his own poetic style :

"Deliverence is not for me in renunciation.  
I feel the embrace of freedom in a thousand  
bonds of delight."

Those Indian writers who have settled abroad have, by and large, painted a dark, gloomy and negative picture of India. To V.S. Naipaul India is wounded beyond recovery. Indians have stunted ego and they are incapable of creative work. This is too pessimistic a portrayal of Indian mind. Khushwant Singh is forthright in his comment that Naipaul's book : *India—A Wounded Civilization* presents a totally negative picture of the country and the illustrations have been so chosen as to fit into his preconceived notions of India. Foreign Indian writers don't visit India for decades during which India acquires a very different landscape. Therefore, their writings remain superficial

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## TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

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and unreal. Because of their outmoded knowledge they fail to address themselves to the major and vital issues India is facing today. India may be a wounded civilization but it has immense power of resistance and recovery.

"The utmost creed of India", says Tagore, "is to find the one in the many, unity in diversity. India does not admit difference to be a conflict, nor does she espy an enemy in every stranger. So she repels none, destroys none, and strives to find a place for all in a vast social order. She acknowledges every path and recognizes greatness whenever she finds it. Since India has this genius for unification, we do not have to fear imaginary enemies. We may look forward to our own expansion as the final result of each new struggle. Hindu and Buddhist, Muslim and Christian shall not die fighting on Indian soil. Here they will find harmony". Thus, the Indian people have an enormous sense of accommodation and co-existence.

The spirit of modern India is something like the

'spirit of nature' itself. It is ever new, constantly changing, yet old. While Indians are actively engaged in their pursuits of scientific achievement, the Vedas and Upanishadas will continue to fascinate and inspire them. Their search for the ultimate continues without losing interest in the mundane pursuits. Meanwhile, they will bear the weight of poverty with their characteristic quietness and contentment. Mahatma Gandhi's concept of 'Ram Rajya' will always lure and inspire them more than the Marx's 'dialectical materialism.' And, perhaps, their means will be as important as their ends. Yet, what India represents today is the emergence of a new 'Sarvodaya Civilization', not merely the continuation of the old 'Varanashram Dharma'. The famous philosopher and historian Arnold Toynbee is quite reasonable in his assertion that "at this supremely dangerous moment in human history, the only way of salvation for mankind is an Indian way. Here we have the attitude and the spirit that can make it possible for human race to grow together into a single family and in this atomic age this is the only alternative to destroying ourselves." □

## UNIVERSITY OF MADRAS

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  - (b) Others :
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  - (a) Teaching/Research/Administrative (Number of years) as Professor/ Principal/Registrar/ Controller of Examinations. :
  - (b) Total experience (give details) :
8. Membership in Professional Bodies, etc. :
9. Any other information :
10. Give two references :
  - 1.
  - 2.

Place :

Date :

Signature of the Applicant

# Ganga Pollution and the Universities

A.K. Sinha\* and Adarsh Kumar\*

River Ganga—the synonym of purity and reverence—originates from Gangotri glaciers in the Himalayas and after traversing through the states of Uttar Pradesh, Bihar and Bengal, merges with the Bay of Bengal at Hooghly. During its 2525 kms. course, the river drains 861404 sq. kms. and sustains 37% of the total population of the country. The river water is used for drinking, bathing, irrigation, navigation and recreational purposes in addition to being used in Industry. It is believed that the river water has medicinal properties too as is clear from the following :

शरीर बर्जरी भूते, व्याधिरस्ते क्लेश्वरे,

औषध बान्धवी तौर्यै, वेद्यो नारायणो हरि ।

The river is also revered as the purifier of the soul and 'Mokshdayini' (मोक्षदायिनी) and this is the reason for a large number of bodies being cremated on the banks of Ganga every day.

Many important towns and industrial estates have developed on the banks of Ganga because of the easy availability of water. In this way, the river has been used for years as a sink for dumping effluents from industries and sewage from urban dwellings, causing deterioration in water quality of the river.

At the 1981 session of Indian Science Congress held at Varanasi and inaugurated by the then Prime Minister Mrs. Indira Gandhi, scientists expressed concern at the growing pollution in the revered river, Ganga. At her instance, Dr. M.S. Swaminathan, the then member, Planning Commission asked the Central Board for Prevention and Control of Water Pollution, New Delhi to conduct studies on the state of the river Ganga. In collaboration with the State Pollution Control Boards of Uttar Pradesh, Bihar and Bengal and the Centre for Study of Man and Environment, Calcutta studies were conducted on the sources of pollution including all human activities, landuse pattern and water quality of the river at selected sites during the years 1981-82 and a report entitled "Basin Subbasin inventory of water pollution—The Ganga Basin Part II (excluding the Yamuna Sub-basin)" was published in 1984. As per this report, sewage of 27 Class I cities and effluents from 137 industries were the main sources of pollution besides the cremation and dumping off of

human bodies and carcasses. Later, it was decided to entrust the universities and institutions situated on the course of Ganga to conduct intensive studies on the river. For this the whole stretch of the river was divided into three zones : the Upper Ganga covering the river stretch from Gangotri to Narora, the Middle Ganga extending from Narora to Buxar, and the Lower Ganga from Buxar Hooghly. The task of allotting funds and projects to different universities, was entrusted to the newly created Ministry of Environment, Forests and Wildlife. Fifteen universities located in the Upper, Middle and Lower Ganga zones were assigned projects to carry out physico-chemical and biological monitoring of the river including the studies on the effect of pollutants on flora and fauna. Each university was allotted a particular stretch of the river and was also asked to create mass awareness about pollution of the river and the need to control and prevent the pollution.

The research projects cover a wide variety including :

- (i) physico-chemical characterisation of the river water,
- (ii) inventory of macro and micro flora and fauna of the river,
- (iii) identification of bioindicators of pollution,
- (iv) investigation of the presence and fate of heavy metals and pesticides in the river,
- (v) microbiological and benthic studies,
- (vi) nitrogen and phosphorus budgeting and eco-modelling,
- (vii) erosion and sediment transport, and
- (viii) landuse in the basin and its impact on river quality.

This massive multi-university and multi-disciplinary programme has been conducted under the guidance of Dr. C. R. Krishnamurti, Chairman, Scientific Commission for continuing studies on Effects of Bhopal Gas Leakage on Life Systems, New Delhi. A chemical and biological profile of the river is also being prepared under the guidance of Dr. Krishnamurti.

In late 1984, it was felt that the problem of Ganga pollution is of such multi-faceted dimensions that it can be tackled only by an appropriate authority. Therefore, Central Ganga Authority was formed under the chairmanship of the Prime Minister. This Authority formulated a Ganga Action Plan conceived by Dr. T. N. Khoshoo, Dr. Nilay Chaudhury and Sri B.P. Verma. The Ganga Action Plan envisages diversion and treatment of waste waters/effluents, use of biogas released from treatment of effluents as a principal source of energy, use of treated effluents as an irrigant and as a source of

\*Botany Department,

Feroze Gandhi College, Rai Bareilly-229-001.



pisciculture and aquaculture and improving the water quality of the river. A high powered committee headed by Prof. M. G. K. Menon, Member, (Science) Planning Commission, guides and monitors the engineering works of pollution control with river quality improvement in addition to reviewing and monitoring of the university research programme. The missionary zeal with which the scientists and

engineers most willingly contribute to Ganga Action Plan, it is hoped, the highest possible quality of the river in different stretches will be restored.

A list of universities and the stretch of the river allotted to them alongwith the titles of the research projects follows. The names of the Principal Investigators, who could be contacted for additional information, are also given.

## LIST OF UNIVERSITIES INVOLVED IN RESEARCH ON GANGA POLLUTION

Sl. No.	Name of the University	Stretch of the River under investigation	Title of the Research Project	Name of the Principal Investigator
1.	Garhwal University, Srinagar, Garhwal	Gangotri to Rishikesh	Pollution study of Upper Ganga and its trihutaries	Prof. H.R. Singh
2.	Gurukula Kangri Vishwavidyalaya, Hardwar	Rishikesh to Garhmukteshwar	Integrated study of the river Ganga	Prof. V. Shankar
3.	Roorkee University, Roorkee	Garhmukteshwar to Narora	Pollution modelling of Upper Ganga Basin	Prof. R.P. Mathur
4.	Aligarh Muslim University, Aligarh	Narora to Kannauj	(a) General Water Quality Measurement (b) Taxonomic studies of bacteria (c) Man river interaction studies from landuse-geographic point of view. (d) Pesticides and radioactivity in river water.	Prof. A.M. Siddiqui
5.	Kanpur University, Kanpur	Kannauj to Shuklaganj	(a) Physico-chemical studies of Ganga water from Kannauj to Shuklaganj (b) Biological studies of the Ganga ecosystem between Kannauj and Shuklaganj	Dr. U.K. Pandey D.B.S. College, Kanpur Dr. A.C. Shukla Christ Church College, Kanpur
6.	Kanpur University : Feroze Gandhi College, Rae Bareli	Shuklaganj to Kalakankar Kalakankar to Phaphamau	A comprehensive study of Ganga and its dependents A comprehensive study of Ganga in the river stretch between Kalakankar (Pratapgarh) and Phaphamau (Allahabad)	Dr. A.K. Sinha Dr. A.K. Sinha
7.	Banaras Hindu University, Varanasi	Mirzapur to Ballia	(a) Plant pollution and community structures and function of riparian and aquatic microphytes in relation to pollution of river Ganga (b) Physico-chemical and biological characterisation of river Ganga in relation to Pollution. (c) Physio-chemical and physiological assessment of heavy metal pollution in river Ganga (d) Pollution of river Ganga with heavy toxic metals.	Prof. R.S. Amhasht. Dr. B.D. Tripathi Dr. L.C. Rai Dr. D.C. Rupainwar

		(e) Coordinated study of river Ganga—Civil Engineering aspects.	Dr. U.K. Chowdhury
		(f) Coordinated study of river Ganga—Study of river water pollution of Varanasi and prevalence of gastro-intestinal morbidities.	Dr. I.C. Tewari and Dr. P.C. Sen
		(g) Hydrological study regarding the pollution of river Ganga—Hydrogeological aspects	Dr. G.C. Chowdhury
		(h) Study of submerged and aquatic plants of medicine and antipollutant value in reference to Ganga Water Pollution.	Dr. R.H. Singh
		(i) Role of sediments in attenuation of trace metals in polluted aquatic environment of river Ganga—Sedimentological aspects.	Prof. M.N. Mehrotra
		(j) Impact of heavy metal pollution in river Ganga on fish	Dr. A.K. Mittal
		(k) Water pollution and endocrine imbalance with special reference to high thyroid physiological and reproduction in some important food fishes.	Dr. T.P. Singh
		(l) A study of river Ganga with reference to environmental and socio-economic awareness—Extension activities.	Dr. T.P. Singh
		(m) Coordinated study of river Ganga—Agricultural aspects.	Dr. R.C. Tewari
8. Patna University, Patna	Buxar to Barauni	Inter-disciplinary study on the problems of water pollution of river Ganga with special reference to identifying biota and their role in rehabilitating the river water sedimentation and specification studies, data generation, collation, analysis and mathematical modelling of river quality and carbon cycling	Dr. R.K. Sharan
9. Rajendra Agriculture University, Samastipur.	Patna to Barauni, Barh to Sultanganj	Coordinated study of the Ganga ecosystem from Patna to Barauni	D. A.K. Srivastava



1	2	3	4	5
10.	Bhagalpur University, Bhagalpur	Barauni to Farakka	Study of river Ganga	Prof. K.S. Bilgrami
11.	University of Kalyani, Kalyani	Katwa to Naihati	(a) Biotic communities and productivity of river Ganga and its bunds as affected by pollution. (b) Bio-ecological studies of river Ganga with special emphasis on various aspects of river fauna as affected by pollutants and restoration of normal faunistic pattern. (c) Physico-chemical studies of the river Ganga for the rehabilitation.	Prof. K.R. Samaddan Dr. S.P. Bhattacharya Dr. R. Sengupta
12.	Bidhan Chandra Krishi Vishwavidyalaya, Kalyani	Katwa to Bandel  Hooghly	(a) Awareness Programme Workshop (b) i. Natural properties, transformation of the sediment, its nutritive value. ii. Effect of run off pesticides on the water quality. (c) i. Microbiology of polluted water of Hooghly. ii. Role of Ganga in Epidemiology iii. Biological monitoring of water quality of Hooghly. iv. Utilisation of fungi for biopurification. (d) Propagation of horticultural aspects for the conservation of the banks of Hooghly river. (e) Effect of pollution due to Saline tidal water on the ecosystem of the deltaic region and its solution	Prof. S. Mukhopadhyay Dr. P.G. Maily Dr. A.K. Mukhopadhyay
13.	University of Burdwan, Burdwan.	Katwa to Berhampur	(a) Characterisation of pollutants in Ganga water. (b) Mathematical and statistical analysis of the problems of pollution, erosion ecology of aquatic population. (c) Effects of polluted Ganga water on micro and macro flora in the river and its adjoining areas and biological control of pollution.	Prof. J. Das Prof. S.K. Chakravarty Prof. A.K. Banerjee

		(d) Harnessing of riverine resources with reference to commercially viable fish species.	Dr. D.K. Chowdhury
		(e) Effects of pollutants of the Ganga on the embryonic and post-embryonic development of some aquatic terrestrial animals at the cellular/sub-cellular levels.	Dr. J.N. Medda
		(f) Interactions between zooparasitic nematodes and vertebrate host inhabiting polluted bodies of water of the river Ganga.	Dr. G. Mazumdar
		(g) Studies on the impact of irrigation and flooding by polluted Ganga water on the soil fauna of cultivated and uncultivated soils (fields) in relation to fertilisers and productivity of soil.	Dr. D.K. Chowdhury
		(h) Utilisation of Human resources—problems and suggestions.	Dr. M.R. Chaudhury
14. University of Calcutta, Calcutta.	Bally to Bandel	(a) Socio-economic maladies created by deteriorating hydro-fluvial region of Ganga and to suggest measures for their amelioration.	Prof. K. Bagchi
		(b) Survey of agro-chemicals (fertilisers, pesticides, etc.) in the riverine land and its impact on the level of pollution of Ganga water.	Prof. T.M. Das
		(c) Effect of pollution on biological health of Ganga water and devising remedial measures.	Prof. N.C. Datta
		(d) Awareness Programme	Prof. T.M. Das
15. Jadavpur University, Calcutta.	Hooghly	(a) Environmental Awareness Programme	Prof. Dilip Bose
		(b) Instrumentation for pollution monitoring of Hooghly estuary.	Prof. P. Som

# A THRESHOLD CONDITION

"Education is a threshold condition for improvement in the status of women", said Shri Abid Hossain, Member, Planning Commission, while delivering the Convocation Address at the Second Annual Convocation of Mother Teresa Women's University. He applauded the University on being launched on a fruitful career of monitoring, consultancy and research in the cause of improving the status of women and pleaded for defying its developmental role "a little more sharply". He suggested that the University could try to promote entrepreneurship development among women to promote self-employment and exhorted it to strengthen its faculty in the area of S & T and to consider, in cooperation with other universities and State Government, to develop a Technology Park. He said "if my suggestion for development of E.D. Programmes is considered in conjunction with Technology Park, you can soon develop into a forward looking and viable institution of higher education which can stand on its own feet for its self-selected activities of monitoring and research." Excerpts

## Present Situation

It was through the efforts of several men and women, great and small, that women's education has made a tremendous progress in India since Independence.

(a) According to census documents, female literacy which was 7.9% in 1951 (25% for males) has gone up to 24.8% in 1981 (46.9%

immense improvement over what was obtained in 1950-51.

(c) I have given above the data regarding literacy and enrolment in elementary education. Let us consider by way of illustration only, the data regarding higher education. In 1984-85, 8,893 girls had enrolled for Ph.D. as against 19,729 boys; 25,046 girls had enrolled for M.Sc. as against 52,797 boys; 7,817 girls

## Convocation

for males).

(b) According to Education Department Statistics, for 1984-85, enrolment ratio in Classes I to V was 76.7% for girls as against 110.7 for boys and enrolment ratio for girls in Classes VI to VIII was 36.3% as against 64% for boys. And although the ratios need to be improved in the context of the target of universalisation of elementary education by 1995, they are an

had enrolled for B.E. as against 1,36,859 boys; 22,056 girls had enrolled for M.B.B.S. as against 54,319 boys and 34,187 girls had enrolled for B.Ed. as against 43,770 boys.

(d) According to latest UGC Report, there were 3 Women's Universities in the country including yours (the others being at Bombay (SNDT) and in Tirupati in

Andhra Pradesh (Padmavati Mahila Vidyapeeth)). There are colleges exclusively meant for women. The overall picture which is presented by these statistics is that of tremendous progress in spite of considerable leeway which remains to be made good. The statistics indicates both the achievement and the potential. Thus in Kerala, the enrolment of girls in higher education in 1985-86 (vide UGC Report) has already reached the mark of equality (49.3%). The enrolment of girls in the Faculty of Education has similarly reached 49%. But the enrolment of girls in Engineering and Technology lags far behind at 6%.

## The National Policy of Education

Since independence, it has been said that three important events have influenced the status of women in India :

(a) Constitution which guaranteed equal right to all citizens (including women).

(b) The Report of the Committee on the status of women in India (1974).

(c) The UN Women's Decade (1975-85) which influenced women's thinking all over the world and forced Governments (including our own) to shift the emphasis of women's programmes from welfare to development. I think, a fourth factor whose importance needs to be underlined is the National Policy on Education which was adopted by Parliament in May, 1986 and which has devoted two full paragraphs to the theme of Education for Women's Equality. They are so important that they bear reproduction.

"4.2 Education will be used as an agent of basic change in the



status of woman. In order to neutralise the accumulated distortions of the past, there will be a well-conceived edge in favour of women. The National Education System will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutions. This will be an act of faith and social engineering. Women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development".

"4.3 The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive overriding priority, through provision of special support services, setting of time targets and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate sex stereo-typing in vocational courses and to promote women's participation in non-traditional occupations, as well as in existing and emergent technologies".

The National Policy has been followed up by a "Programme of Action" (1986) and I understand that the new initiatives of the Central Education Ministry comprise Central assistance for appointment of a lady teacher in each primary school, reservation of seats for girls in Navodaya Vidyalayas, proposed establishment of four women's polytechnics, assistance for opening of non-formal and adult education Centres for Women, etc.

## Other Administrative Measures

The New 20-Point Programme has also a separate point dealing with Women's equality. In 1985, Government of India constituted a separate Department of Development of Women and Children and this Department monitors about 27 schemes for women, some women-specific and others for the male and the female population. A National Advisory Committee for Women has been set up with the PM as Chairman. The implementation of Women's programmes has been sought to be made more effective by :

- (a) Provision of technical expertise.
- (b) by sensitizing administration to the Women's perspective.
- (c) by involving women in the planning and implementation.

## Women In other Sectors

Education is a threshold condition for improvement in the status of women. However, education is a necessary but not a sufficient condition. There must be advance in other fields for sustained improvement and the picture is quite bright.

- (a) The expectation of life at birth has improved from 44.7 years in 1961-71 to 52.9 years in 1971-81.
- (b) The sex ratio has registered a slight rise—from 930 women per thousand men in 1971 to 933 per thousand men in 1981.
- (c) The average age at marriage for girls has reached 18.3 years in 1981 as against 17.2 years in 1971, achieving for the first time an average higher than the minimum prescribed age for marriage.
- (d) For the first time since Independence, the elected representation of women in Parliament has gone up to almost 10% of its total membership.

(e) Several legislative enactments/amendments have come into force to protect the interests of women.

## A Comparative Perspective

A recent issue of Times Literary Supplement (June 3-9, 1988) referred to a topical publication entitled "The American Women : 1987-88. A report in Depth". This book, which is stated to be first of what promises to be an annual publication by the congressional causes for women's issues gives some interesting statistics. It shows that :

- (a) a quarter of American businesses are now owned by women.
- (b) 37% of Law School Graduates are women.
- (c) 51% of children of pre-school age have mothers who work full-time as opposed to only one quarter as recently in 1970.

These are impressive statistics. In Europe, Norway is stated to have an all-woman Government (The Prime Minister Gro Harlem Brundtland has 7 women Cabinet Colleagues in her 17 members Team). The Norwegian PM on the occasion of completion of two years in office recently listed following among her achievements— increase in maternity leave, introduction of the right to nursery school for every Norwegian child and doubling of the rate of nursery school buildings.

Such statistics and such journalistic accounts do suggest a need for an annual publication reviewing the "State of World's Women" as UNICEF does in respect of children which can indicate progress being made by women across countries in the world.

All over the world not excluding India, there is a great awaken-

ing among women. There is an upsurge of feminism and liberation ideologies. There is also a new academic discipline called "Women's Studies" which has made progress from an initial stage in which the concern was to identify and sacrifice sexism, through study of literacy representation of women to a diagnosis of 'patriarchism' to the definition of culture itself as male-centred. These studies are highly theoretical and reportedly transcend Marx in his theory of Class war based on economic exploitation and Freud in his theory of neurosis. Far be it from me to enter such esoterically deep waters. But as a Planner, concerned with rapid economic development of the country, I wish to make a few observations.

### Reflections of a Planner

First of all, the plight of women must be considered as part of the general phenomenon of inequality. This inequality has been inherited by us and it pervades several walks of life. Its dimensions include the plight of SCs/STs; the plight of backward minorities; the plight of the physically handicapped; the plight of the people staying in remote and hilly areas; the plight of the urban and rural poor etc. But the most glaring and crucial inequality of all is the inequality among nations; the inequality between the developed and the developing world. India has a low per capita income; we are wedded to a path of rapid economic development through democratic means. All Indians including women-mothers wishes, sisters, daughters, have to contribute their mite towards maximisation of development. It is only in the context of rapid national economic development that we can think of reducing gender inequalities.

Secondly, every country has its

own cultural background. We, in India, can take pride in the fact that we have a history of an enlightened attitude towards women's problems barring a few sections and periods. Women were encouraged to attain the height of Indian philosophical discourse as is shown by examples of Brahnavadinis like Gargi and Maitreyi who fiercely debated with Sage Yajnavalkya abstruse questions of metaphysics. The opposition to women's education in 19th century India was not fierce and several male-leaders like Jyotiba Phule and D.K. Karve in Maharashtra and Ishwar Chandra Vidyasagar in Bengal bore the brunt. Our Constitution is a manifesto of liberation for women. In UK and USA, women had to wage decade-long battles to gain the right of franchise in the period 1910-20 and 1920-30 but in India, the right was incorporated without so much as a murmur of dissent. No doubt, there are deeply ingrained religious and cultural attitudes as indicated in the well-known cases of Shahabano in Muslim Personal Law, Rup Kunwar Sati case and dowry deaths. However, it must be remembered that these cases are not purely those of social prejudices but have deep economic and historical ramifications. (I am told that in spite of Dowry Prohibition (Amendment) Act, 1984 which came into force on 2-10-85, there were 1,319 dowry deaths in 1986 and 1,418 in 1987). Moreover, the executive and judiciary have consistently supported the intention of Legislature. Thus, Supreme Court has held that it was necessary to punish with death those convicted of murdering brides by burning them for more dowry. Central Government has agreed that on registration of a dowry death case against a Government Servant, he will be suspended.

Thirdly, we must not lose sight

of the need for a balanced, integrated view of the affairs of the world. Just as we in India are engaged in a struggle for rapid economic development, the planet earth is engaged in a struggle for survival in the face of ecological degradation, the threat of nuclear war and forces of social destabilisation. For purpose of raising of awareness, i.e. to say, for heuristic purposes, we may talk of "sexual politics" or of "gender strife" but we should not forget the unity of human kind and the social institution of family which is a bulwork against forces of social destabilisation and which is the only institution known to us so far for promoting and propagating humane values inter-generationally.

### The University

When the Government of Tamil Nadu decided to establish a Women's University, they appointed an expert Committee to decide on the objectives of the University. The expert committee under the Chairmanship of the Dr. Malcolm Adiseshiah considered three models:

Model I—University with all levels of instruction and research.

Model II—University restricted to Post-Graduate Course and research.

Model III—University offering monitoring, consultancy and research programmes.

By monitoring, they meant monitoring of women's education at all levels in the State as well as the country. By consultancy services, they meant consultancy services in the area of the development of women's education in the State and the country and by research, they meant research in the area of women's studies, start-

ing with studies of neglected and discriminated sections of the forgotten half of our people viz. our rural women, our destitute women, the employment norms applied to women, men's attitudes to women, etc. Thus, the university was envisaged to be a national centre to serve as a catalyst and to sponsor research on the impact of social change on women's lives, transforming the many methods and perspectives of many disciplines but also inventing some. The following research areas were identified :

- (a) Indian Feminism—The special context of women in India.
- (b) Economic values of work in the home (household).
- (c) Over-work (work strain).
- (d) Impact of Science and Technology (development impact).
- (e) Child Labour.
- (f) Intra-household inequality.
- (g) Mobility trends among women.
- (h) Status of women scientists and administrators.
- (i) Traditional versus new image of women.
- (j) Violence of women.
- (k) Methodology for research.

The Expert Committee recommended the third model and the Government wisely adopted the recommendations of the Expert Committee.

The University which was established in 1984 has 9 Departments viz. Economics, Education, English Family Life Management, Historical Studies, Psychology, Sociology, Tamil and a Computer Centre. M. Phil and doctoral courses are conducted with a deliberate focus on women, their problems and perspectives. Besides regular courses, M. Phil in women's studie

is offered under a 2-summer sequential programme to help develop the potentialities of the serving women teachers around. The University proposes to have 8 more departments including one on Development and one on Appropriate Technology. The University has taken up projects on identifying sex bias and sex discrimination in the school textbooks, college curriculum and non-formal learning materials as part of its monitoring programme. The University with a view to build up a proper base has attempted a number of micro-studies which include :

- (a) Women workers of Kodaikanal.
- (b) Profile of fisherwomen of the coastal area of Tamil Nadu.
- (c) Analysis of dowry practices of the dominant communities in Tamil Nadu.
- (d) Role conflicts of working women : portrayal of women in mass communication media.
- (e) Health status of rural women and children in Tamil Nadu.

The University with assistance from Central Department of Youth Affairs and Sports, proposes to start an exclusive centre for adventurous activities viz. trekking, boating, horse-riding, etc. for women students drawn from colleges of Tamil Nadu.

The total commitment of the University to the extension aspect of education is seen from its project of total eradication of illiteracy at Kodaikanal.

#### Some Suggestions

Your University has been well and truly launched on a fruitful

career of monitoring, consultancy and research in the case of improving the status of women. However, your university can perhaps define its developmental role a little more sharply. Now-a-days, one cannot talk of research except by linking it with development. Development has many dimensions but considering that you are a new educational institution, perhaps you could consider some areas of human resource development for your selected target group viz. women. You can try to promote entrepreneurship development among women of different strata so that self-employment is promoted. At present, we have two national level institutions, one at Delhi under the auspices of the Industry Ministry and the other at Ahmedabad which is run by a consortium of financial institutions. If I mistake not, nearer home, Tideo may be running some E.D. programmes. Your assets are: your academic faculty, your very attractive, salubrious, sylvan surrounding and above all, your commitment to the cause of women's development.

A second suggestion is to strengthen your faculty in the area of S & T and to consider, in cooperation with other universities and State Government, to develop a Technology Park at Kodaikanal. The field of electronics, in my view, would be an ideal field for such an activity but one cannot be dogmatic in these matters.

If my suggestion for development of E.D. Programmes is considered in conjunction with Technology Park, you can soon develop into a forward-looking and viable institution of higher education which can stand on its own feet for its self-selected activities of monitoring and research. □



# IGNOU to Offer More Courses

Indira Gandhi National Open University is reported to have decided to increase the number of courses and open more study centres from January next year. The university also hopes to increase the intake of students with the starting of new programmes.

Four new programmes will be undertaken in December. The university will admit an additional 10,000 students bringing its total strength to over 32,000. The proposed programmes will cover computer applications, library and information science, the third module in business management and a B Sc. programme.

Prof. G. Ram Reddy, Vice-Chancellor, said the university had built the requisite infrastructure in its three years of existence to start more courses. Under preparation are courses in water resources and energy conservation management which will also be started next year. The university also plans to open 30 study centres throughout the country from the next year.

In a recent study conducted by the university, it is shown that IGNOU has taken a lesser number of years to start its existent programmes in comparison with the performance of other open universities in the world. According to the study it has taken 22 months to begin its first programme and another 16 months to have its second programme running. In comparison the British Open University, the oldest amongst the universities, had taken 40 months to establish its first programme. However, the university has 120,000 students, including 66,763 students in its undergraduate programmes. The Pakistan Open

University (POU) had taken 26 months to establish the first programme.

In a recent memorandum of understanding signed with the British Government, it has agreed to supply computer software and hardware for nearly Rs. 8.5 crore. The university has already 51 personal computers in operation.

The network system started by IGNOU, coordinating the functioning of other state open universities to avoid duplication of courses, has shown results. The Andhra Pradesh Open University (APOU) is now using the food and nutrition course evolved by IGNOU for its students, while the Nalanda Open University in Bihar has decided to use the public accountancy programmes of the Rajasthan Open University. Students of APOU have also taken up courses in creative writing and management in IGNOU under the network system. Moved by the popularity of the creative writing programme in English, the university has decided to start the same in Hindi soon.

## Restructuring Medical Education for Social Bias

Dr. A. Gnanam, Vice-Chancellor, University of Madras, said that medical education should be given a social and community bias. He was inaugurating a conference of the Association of Otolaryngologists of India, Tamil Nadu and Pondicherry Region. He said the magnitude of speech and hearing problem particularly in the rural area, demanded an appreciable increase in the medical manpower. To meet this challenge

there was need to restructure the educational system towards specific needs of society. At present the system was institution-oriented and urban biased with emphasis on clinical practice. This theoretical approach should become action-oriented. Doctors should go out and tackle the health problem in the community and acquire experience while serving the people, he said.

Dr. Gnanam said there should be a reorientation of medical colleges themselves to play an integral role in the national health care service. Health care delivery could not be a separate system away from medical colleges.

Dr. (Mrs) Ramani Sivaraman, Director, Medical Education, who presided, said ENT specialists should launch a big cancer screening programme. Dr. S. Kameswaran said continuing medical education and efforts of ENT specialists should be directed towards solving some of the known problems. For instance, he pointed out that the ICMR Study had shown that one of the commonest diseases responsible for a large number of deafness was upper respiratory tract infection. Neglected common cold and discharging ear were found to be the causes.

Dr. K. K. Ramalingam, President of the Association of Otolaryngologists of India, said for admission to MS in ENT in Tamil Nadu the present stipulation of DLO course after passing MBBS must be removed. In other States, the students were admitted to the MS directly after passing MBBS.

## U.S. Assistance for Research Projects

Under the Indo-US collaborative research project programme

the United States Department of Agriculture is reported to have announced six research grants for Indian projects to support increased food productivity. The projects include use of fertilizers in dryland areas, application of pesticides in rice cultivation, study of freshwater prawn culture, long term effects of diet on children, use of additives on finished cotton fabrics and the selection of broilers for improving meat yields.

Out of the total grant the National Council of Applied Economic Research, New Delhi, has been awarded Rs. 11,246,170 for a project to study effective uses of fertilizers.

The Rice Research Institute in Cuttack has been awarded Rs. 1,970,000 to support a study on pesticides used in rice cultivation.

The Bhopal University has been granted Rs. 1,971,000 for a study on the factors affecting the breeding and development of freshwater prawns in Bhopal and Hoshangabad districts.

The Avinashilingam Home Science Institute for Women in Coimbatore has been granted Rs. 1,073,702 for a US-India project to study long term effects of low cost, locally available dietary supplements on the physical and biochemical development of children.

The Bombay Textile Research Association will get Rs. 1,017,838 for a study on the effects on additives on finished cotton fabrics.

### **Academic Staff College at Lucknow University**

The U.G.C. sponsored Academic Staff College (ASC) at Lucknow University was recently inaugurated by Professor S.P. Nagendra, Vice-Chancellor of the Univer-

sity. Professor Nagendra said in his inaugural speech that the in-service training schemes that are to be organised by the ASC are meant to bring about a qualitative change in the higher education sector and promised to provide all help to the ASC to develop itself. Professor (Ms.) Venkurai Patil, Director, Indian Institute of Management, Lucknow, the Chief Guest, in her address, called upon the teachers to develop excellence and consider it a major aim of their calling.

Twentyeight university and college lecturers drawn from five U.P. universities attended the four-week Orientation Programme. The teaching faculty was drawn from different parts of the country and consisted of professional experts and eminent academicians.

### **Egyptian Education Minister Visits JNU**

A six-member Egyptian delegation led by the Minister for Education & Science, H.E. Mr. Ahmed Fathy Serour visited the Jawaharlal Nehru University recently. The delegation included Dr. Mohamed El Said, Cultural Counsellor, Dr. Salah Mursy, Expert from Egypt (Dean) and Dr. Salah Abbas, Expert from Egypt (Dean).

The delegation was taken round the Central Instrumentation facility and Genetic Engineering labs by Prof. H.K. Das at the Science Schools of the University. The delegation was impressed by the upkeep of various modern scientific equipments in the labs.

The Egyptian delegation is on a visit to India to study Indian experiences and exchange views on matters of mutual interest.

### **Sports Infrastructure at Anna University**

The University Grants Commission (UGC) has accorded its approval for the various projects for development of sports infrastructure

at the Anna University under the NSO programme at a total cost of Rs. 54.00 lakhs. The UGC's share will be Rs. 24.75 lakhs. The projects proposed to be taken up include Construction of Indoor Stadium, Construction of Outdoor Stadium, Construction of Swimming Pool, Improvement of existing stadium/Swimming pool/Gymnasium, etc., Flood lighting of Playfields, and Development of Playfields

### **Process Simulator Studies**

The Government of India in the Department of Electronics, have sanctioned the research project. "Process Simulator Studies on LPCUD Polycrystalline Si for Multi-layer Structures" submitted by Madras Institute of Technology of the Anna University and have agreed to provide a grant-in-aid of Rs. 3.96 lakhs spread over a period of 2 years. The first instalment of the grant-in-aid amounting to Rs. 3.28 lakhs has since been sanctioned.

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### **Communication**

Dear Sir,

Dr. J.N. Kapur's article on privileges and responsibilities of a college Principal, *University News*, 15 August, 1988 made an interesting reading. I would like to add one or two points. An entrant to the academic life should always remember that he will be at the top one day or the other and his behaviour has to be exemplary from the start. He must also slowly cultivate sensitivity to the small talks behind his back.

Yours etc.

V. Narasimhan  
Registrar

Sree Chitra Tirunal Institute for  
Medical Science & Technology  
Trivandrum

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# News from Agril. Varsities

## Rabi Pulses Workshop

### Haryana Agril. Officers' Workshop

"Though a lot of agricultural technology is available, it has not reached the farmers. It is imperative that it must percolate to the village level workers and through them, to the farmers", said Shri Tayyab Hussain, Agriculture Minister of Haryana while inaugurating the three-day Agricultural Officers' Workshop in the College of Agriculture of the Haryana Agricultural University.

Addressing the scientists and the officers of the department of agriculture, Shri Hussain said that there are areas like marketing, production and sale of seeds, producer-consumer relationship, changing crop patterns that need to be studied and streamlined. He asked the scientists and field workers to ensure that whatever recommendations they make during the workshop are communicated in simple Hindi to the village level workers.

Shri Tayyab Hussain pleaded for closer collaboration between various organisations engaged in agricultural development and said, "We must not pass on the buck but work jointly even at the district level".

Speaking on the occasion, Dr. Har Swarup Singh, Vice-Chancellor, Haryana Agricultural University said, "The scientists should take some research projects to identify the factors for their regional imbalances, and the Department of Agriculture should also initiate suitable measures for increasing the agricultural productivity of lower yield districts." Dr. Singh expressed

confidence that the deliberations in the workshop would be immensely beneficial to the scientists of the University as well as to the field functionaries of the state Department of Agriculture. He asked the participants to identify and recommend key impact-points for increasing the production of rabi crops.

Dr. Mahendra Singh, Director of Research gave a resume of the research work being done at the University. He disclosed that the University has released three new improved crop varieties, namely Bajra hybrid HHB-60, American Cotton HS-45 and Raya variety RH 8113.

The hybrid bajra HHB-60 matures in 75 days with an average yield potential of 35 q/ha. It has medium bold grain and is resistant to downy mildew of bajra.

The American cotton variety HS-45 possesses round and bold bolls and can yield 20 quintals of seed cotton/ha. Raya RH-8113 called "Saurabh" matures in 150 days and yields about 18-19 q/ha. This new variety will increase and stabilise the production at higher level in north-western region in general and Haryana in particular. He also assured the field functionaries the fullest cooperation of the university scientists.

About 500 University scientists, extension specialists and the officers of the Haryana State Department of Agriculture attended the workshop.

All India Co-ordinated Rabi Pulses Workshop was inaugurated at Punjabrao Krishi Vidyapeeth, Akola on 12th September, 1988 by Prof. H.B. Ulemale, the Vice-Chancellor of the University under the Chairmanship of Dr. Shankar Lal, Project Director (Pulses), Kanpur.

In his inaugural address, Prof. H.B. Ulemale stressed the need to increase pulses' production as it is the most important source of protein for majority of the people and said that this can be done by replacing some area under cereals and cash crop by pulses. He observed that the pulse crops are beneficial to the farming community in many ways. For obvious reasons, they can be taken as inter-crops, in rainfed conditions and they yield additional harvest without affecting the productivity of main crops.

Dr. Shankar Lal, Project Director, made many valuable suggestions and advised that only meaningful trials be accepted to conduct research and at least five years response of the variety may be taken into account while releasing a variety for the farmers.

Dr. Lal released the Research Bulletin of the Punjabrao Krishi Vidyapeeth in pulses and presented the project report regarding the research undertaken during the year 1987-88.

About 200 Agricultural Scientists from all corners of the country attended the Workshop to share their experiences and to formulate guidelines to increase the production of pulses.

### Training Camp for Rural Youth

In the modern times the importance of agro-forestry has become inevitable in order to maintain the



ecological balance, said Dr. Prataprao Salvi, Vice-Chancellor of Marathwada Agricultural University and the President, AIU. Dr. Salvi was speaking at the inauguration of a ten-day camp jointly organised by the Department of Sports and Youth Affairs of the Ministry of Human Resource Development, Government of India, and Marathwada Agricultural University in the College of Agricultural Technology.

Dr. Salvi said only 3 per cent forest land was now in existence, whereas according to scientific norms, we should have one-third forest area of our entire region and hence it had become extremely necessary to increase our forestry. He expressed the hope that rural youth after receiving their training would go back to their villages and create an awareness among the rural masses of the importance of agro-forestry. Dr. Salvi appreciated the efforts of the Extension Department of the University and exhorted them to hold more of such training camps for rural youths.

Mr. Navin Singh, Deputy Conservator of Forests, who presided over the inaugural function, said there was a gap between the implementation of the government schemes and the achievement of people of such developmental schemes. Hence the tree plantation programme should be a drive of the people and in view of this, such training camps would train the rural youths technically in agro-forestry. Mr. Singh said the government had specially introduced the development of social forestry to inculcate the habit of tree plantation among people and made it a public oriented programme.

The objective of such training camps is to train the rural youths who will subsequently be instrumental in bringing about the agri-

cultural and rural development by applying latest agricultural technology. The rural youths are being trained in agro-forestry, budding and grafting, sericulture, dairy development, preservation of fruits and vegetables, land and water management, poultry, bakery and processing of oilseeds and running of cooperative societies.

### **Nigerian Delegation Visits HAU**

A Nigerian delegation consisting of two Vice-Chancellors and two senior officers of National University Commission of Nigeria recently visited Haryana Agricultural University to study the administrative set up and working of the university so as to establish a fullfledged Agricultural University in Nigeria on the pattern of HAU. The members of the delegation visited the constituent colleges of the university and held discussions with the senior scientists of various disciplines. A meeting with the Vice-Chancellor, Dr. Har Swarup Singh, Deans and Directors of the University was held where the visiting team was acquainted with the research and extension work being done by the HAU.

### **Wheat Scientists Meet**

The 27th all India wheat workshop held recently at the Haryana Agricultural University at Hissar has

identified five new varieties each with different characteristics for cultivation in specified regions in the country. Among them is PBW 226 which is highly tolerant to Karnal Bunt and resistant to rusts. Another variety Raj 3077 is tolerant to alkaline and saline soil conditions which are spread in the three states—Haryana, Rajasthan and northern Gujarat. For the hilly region in the north the workshop has identified HS 240 which is highly resistant to powdery mildew, a serious problem in this area.

With this, the wheat scientists have for the first time achieved success in identifying breeding materials which are completely resistant to Karnal Bunt a scourge of farmers growing superior quality grain in the country's main wheat belt. This has opened up possibilities of developing varieties suitable for the wheat growers in Punjab, Haryana and Uttar Pradesh.

The workshop was attended by nearly 300 wheat scientists from all over the country and senior officials of Indian Council of Agricultural Research, state departments of agriculture, and seed production agencies. Representatives from neighbouring countries like Nepal, Bhutan and Afghanistan as well as collaborating international wheat research organisations from Mexico and Australia also participated.

## **News from Abroad**

### **Students to Assess Performance**

The heads of Australia's universities and colleges have recommended that students' assessment of their lecturers should form part of a new system to measure institutional performance.

Student rating of academics should become standard practice,

according to a report by the Australian 'Vice-Chancellors' Committee (AVCC) and the Australian Committee of Directors and Principals of Advanced Education.

Students could be given assessment forms which might include questions on the quality of lectur-

ing and tutorial classes, and the promptness with which students' work was corrected and returned. Such information could be used as part of each academic's promotion.

The report recommends a series of "performance indicators" for institutions, including student completion rates, the measures of student demand and the quality of new students, and the use of research grants. Some departments or faculties should conduct evaluations on an ad hoc basis for improving teaching and the curriculum offered, the report says.

Performance indicators are to be used by the Federal Government under a new system by which universities and colleges provide "institutional profiles" as part of their applications for Commonwealth grants. The report by the Vice-Chancellors and college heads is clearly intended to provide an alternative to the scheme proposed by the government.

A spokesman for the AVCC said the Government's profiles would only give a broad measure of the strengths of institutions. The ones proposed by the institutions themselves would produce a gauge of how individual staff were coping. "The government's exercise is so broad it does not allow them to pick individuals doing excellent work, but who are not doing it in an obvious way," the spokesman added.

The academics' union raised questions about the plan to use student opinions in any assessment process. A spokesman for the Federation of Australian University Staff Associations said the rights of academics became an issue when students were asked to assess teaching staff formally. A small group of students who did not like the teaching style of a particular lecturer could distort a finding.

## News from UGC

### INSAT-1B Programme of UGC

Between 8th October to 15th October, 1988 the following schedule of telecast on higher education through INSAT-1B under the auspices of the University Grants Commission will be observed. The programme is of one hour duration every day from 12.45 p.m. to 1.45 p.m. (Repeated from 4 p.m. to 5 p.m.) and will be available on the TV Network throughout the country. For the viewers in Delhi and surrounding areas these programmes can be seen on the second channel.

#### 8.10.88

"Water Sports : Yachting—II"  
"Rare Musical Instruments :  
Jalatharangam"

#### 9.10.88

No Telecast

#### 10.10.88

"Expert Systems"  
"Raw Materials : Rice"  
"Liquid Crystals—I"

#### 11.10.88

"Teacher Training in Low Cost  
Instrumentation—A Practical  
Approach"  
"From Darkness to Light :  
Cataract and Its Remedies"  
"Self Organization in Chemical  
Systems"

#### 12.10.88

"How Flowers Avoid Incest"  
"Art of Ajantha—II"  
"Winter"

#### 13.10.88

"Diode—Supplement"  
"Specches on Speech—I"  
"Dr. Meghnad Saha—II  
The Scientist"

#### 14.10.88

"Non-Euclidean Universe"  
"An Interview with Prof.  
Antony Hewish—Interplane-  
tary Disturbances—II"  
"Keeping a City Clean"

#### 15.10.88

"Paul Klee on Modern Art—  
Genesis"  
"Dance of Siva"

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#### Books Received

##### **The Authoritative Course**

**British Universities' Guide to Graduate Study 1988-89 : The Authoritative Source, London, Association of Commonwealth Universities, 1988, 308p, £ 19.50.**

Published by the Association of Commonwealth Universities (ACU) for the Committee of Vice-Chancellors and Principals of the Universities of United Kingdom (CVCP), the Guide is a presentation of facts and information on Postgraduate taught courses in British Universities. In this fourth edition, the compilation includes information about what is available in much more detail taking note of the needs of both the British and the Overseas Students. The Guide includes an article on the British University scene and the nature of graduate work, details about the 2500 courses and a profile of each of the British universities. The general essay on the British university scene describes British university system, the structure of graduate courses and the procedures for admission and will be found particularly useful by overseas students. Details are also provided about the fee structure, scholarship and award making bodies. The directory of 2500 taught courses provides a short description of course content, method of assessment, length, title and qualification awarded of each of the courses under 54 subject groups. Individual university profiles provide their academic organisation and size, residential accommodation and social facilities. The Guide is indeed an authoritative source of information on postgraduate taught courses in the British Universities.

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## **GATE 89**

### **GRADUATE APTITUDE TEST IN ENGINEERING**

Admission to **Indian Nationals** to Post Graduate Courses, with Scholarship, in Engineering/Technology/Pharmacy/Architecture at Engineering Colleges/Institutes in the country will be open to only those who qualify through **GATE**. **GATE** is conducted on a national basis every year on second Sunday of February. While qualifying at **GATE** is essential, final selection and award of scholarship will be guided by the procedures laid down by the Institution offering such admission. Sponsored candidates desirous of availing the scholarship must have qualified at **GATE**.

**GATE** is a mandatory qualification for self-financing foreign students and children of Indians including non-resident Indians, who hold non-Indian Passports but have obtained their qualifying degrees from Indian Institutions/Universities for the admission to post graduate courses. Admission of such candidates will be subject to Government of India clearance and they will not be entitled for scholarship.

#### **THE FOLLOWING ARE ELIGIBLE TO APPEAR AT GATE**

- a) Bachelor's degree holders in Engineering/Technology/Pharmacy/Architecture and those who are presently in the final year of one such programme.
- b) Those who have already obtained by examination professional qualifications (such as AMIE) recognised by UPSC as equivalent to B.Tech./B.E.
- c) Master's degree holders in Sciences/Applied Sciences and those who are presently in the final year of one such programme.
- d) Students in the 2nd year of the post B.Sc. Four Year Integrated Master's degree programme in Engineering/Technology.

#### **IMPORTANT DATES :**

Application forms will be issued from	26 OCTOBER, 1988
Last date for issue of application forms by post	14 NOVEMBER, 1988
Last date for issue of application forms at counter	29 NOVEMBER, 1988
Last date for receipt of completed application forms	30 NOVEMBER, 1988

**DATE OF EXAMINATION** **SUNDAY, 12 FEBRUARY, 1989**

#### **INFORMATION BROCHURE AND APPLICATION FORM :**

These can be obtained by sending (1) the application fee of Rs. 40/- only by a crossed Bank Draft drawn in favour of IIT \*—————payable at \*————— (\* insert the place of IIT to which you are making the request) or Indian Institute of Science, Bangalore payable at Bangalore (2) a requisition letter giving the Bank Draft details and (3) two slips of size 5cm x 10cm indicating your postal address in **CAPITALS** to any of the following.

Chairman, GATE, Indian Institute of Technology, Bombay-400076 / New Delhi-110016 / Kanpur-208016 / Kharagpur-721302 / Madras-600036 / Indian Institute of Science, Bangalore-560012.

**Ph.D. PROGRAMMES :** Candidates qualifying at **GATE** are also eligible for the Post Graduate Scholarships for PG Programmes leading to Ph.D. degree in Engineering & Science. However, admission and award of scholarship will be governed by the rules & regulations of individual Institutions offering such admission.



# AIU Library & Documentation Services

One of the important functions of the Association of Indian Universities is to act as a clearing house of information on higher education in the country. Towards this end the AIU Library is engaged in collection building and developing instruments for the dissemination of research information. Over the years a valuable collection of books and documents on different aspects of higher education has been acquired.

The Library has also developed Bibliography of Doctoral Dissertation as an effective tool in the dissemination of research information. Retrospective bibliographies covering the period 1857-1970 and 1970-75 were the first to appear. Effective 1975, however, the bibliography is issued annually in two volumes. One volume deals with Natural and Applied Sciences while the other records doctoral degrees awarded in Social Sciences and the Humanities. In addition to the normal bibliographical details like the name of the Research Scholar, the title of the thesis, years of registration for and award of the degree, and the name of the University accepting the thesis for award of a doctoral degree, the bibliography also gives name and complete address of the supervising teacher and an availability note that seeks to inform whether a copy of the dissertation is available for consultation and use in the University Library/Department or Registrar's Office.

The columns 'Theses of the Month' and 'Research in Progress' are intended to cut out the time lag between the receipt of information and its inclusion in bibliography. Such Universities as are not sending us regular information in respect of Doctoral Theses accepted and research scholars enrolled are welcome to make use of these columns.

The Library is open from 9.00 a.m. to 5.30 p.m. Monday through Friday.

## CURRENT DOCUMENTATION IN EDUCATION

### A Select Bibliography on Autonomy and accountability

Alexander Jeffrey C. The university and morality: A revised approach to university autonomy and its limits *Journal of Higher Education* 57(5), 1986, 463-76.

Asthana, R.S. Teacher accountability: Meaning and implications. *Journal of Indian Edn* 9(4), 1984, 1-6.

Azhicode, Sukumar. University autonomy: A faded concept. *University News* 18(24), 15 Dec. 80, 683.

Berchem, Theodor. University autonomy: Illusion or reality? *Oxford Review of Education* 11(3), 1985, 245-54.

Clarke, Alex M. and others. University autonomy and public policies: A system theory perspective *Higher Education* 13(1), 1984, 23-48.

Dahrendorf, Ralf. Autonomy—theory and practice. *Times Higher Education Supplement* (277), 11 Feb, 1977, 5.

Dandapani, S. Fostering a sense of accountability. *Journal of Indian Education* 13(5), 1988, 11-13.

Drake, Keith. The recovery of university autonomy in Great Britain. *Minerva* 22(3-4), 1984, 346-64.

Ecker, George. Relationship of institutional size and complexity to faculty autonomy: A reconsideration and caution. *Research in Higher Education* 11(4), 1979, 295-307.

Eisemon, Thomas Owen. Reconciling university autonomy with public accountability: The State, University Grants Committee and higher education in New Zealand. *Higher Education* 13(5), 1984, 583-94.

Gellert, Claudius. State interventionism and institutional autonomy: University development and state interference in England and West Germany. *Oxford Review of Education* 11(3), 1985, 283-93.

Ghosh, D.K. Aspects and modes of external influences in the university administration. *EPA Bulletin* 7(3&4), 1984, 26-36.

Gore, M.S. Universities and the government. *New Quest* (54), 1985, 337-51.

Holmes, Owen G. From 'autonomy to system'—completing the process. *University Affairs* (Ottawa), 17(3), Mar 76, 6.

Kaul, J.N. University community and its autonomy *Indian Education* 11(1-2), Apr-May 81, 35-7.

Kuhner, Hans. Between autonomy and planning: The Chinese Academy of Sciences in transition. *Minerva*, 22(1) 1984, 13-44.

Lewis, Harry A. A teacher's reflections on autonomy. *Studies in Higher Education* 3(2), Oct 78, 149-59.

Mckenna, James B. University reform in Spain: New structures for autonomy and accountability. *Comparative Education Review* 29(4), 1985, 460-70.

Michael, Ian. Academic autonomy and governmental demands: The case of Malawi. *Minerva* 16(4), Winter 78: 465-79.

Millet, John D. External and other threats to institutional autonomy. *Educational Record* 58(4), 1977, 378-87.

Mucha, Janusz. University legislation and the decline of academic autonomy in Poland. *Minerva* 23(3), 1985, 362-82.

Rao, M.R. and Raju, V.B. University autonomy: A re-examination. *New Frontiers in Education* 7(1), 1977, 61-76.

Sarma, Ramesh Chandra. University autonomy: An analysis and proposal. *University Administration* 5(2), Dec. 78, 20-31.

Shatrugna, M. Blow to university autonomy. *Eco & Pol Weekly* 23(32), 1988, 1615.

Volkwein, J. Fredericks. Campus autonomy and its relationship measures of university quality. *Journal of Higher Education* 57(5), 1986, 510-528.

## AUTONOMOUS COLLEGES

Albert, D. College autonomy: An appraisal. *New Frontiers in Education* 12(4), Oct-Dec. 87, 49-52.

Augustine, Mithra. Working of autonomy at the Madras Christian College: An appraisal. *Higher Education Today* (20), Feb 83, 27-8.

India. University Grants Commission. Revised guidelines on the scheme of autonomous colleges. New Delhi, the Author, 1986. 90p.

Naik, J.A. Do our universities deserve autonomy? *Illustrated Weekly of India* 99(4), 22 Jan. 1978, 28-9.

Raman, A and Casimir Raj, N. The autonomous Iyola College: An analysis of its administrative structure. *New Frontiers in Education* 17(3), 1987, 70-78.

Reisz, R.P. and Venkitaraman, A.R. Implementation of college autonomy. *New Frontiers in Education* 10(1), 1980, 28-39.

REPORT OF the Expert Committee on autonomous colleges. *New Frontiers in Education*, 17(2), 1987, 68-99.

Swamy, C.K. Implementation of autonomy at St. Joseph's College. *New Frontiers in Education* 12(2), Apr-June 1982, 61-7.

Thangaraj, M.A. Case for college autonomy. *Higher Education Today* (20), Feb. 83, 4-10.

Thangaraj, M.A. Preparing a college for autonomy. *New Frontiers in Education* 10(2), Apr-June 1980, 34-43.

THEORY AND practice of college autonomy: Report of a seminar on autonomous colleges. Trivandrum, 1983. *Higher Education Today* (20), Feb. 83, 17-22.

Venkitaraman, A.R. A plea for college autonomy in the light of experience in Tamil Nadu. *Higher Education Today* (20), Feb. 83, 11-16.

Venkitaraman, A.R. Four years of autonomy at American College. *New Frontiers in Education* 12(2), Apr-June 1982, 47-51.

Wycliffe, Nirmala. Autonomy at Lady Doak College. *New Frontiers in Education* 12(2), Apr-June 1982, 55-60.

# THESES OF THE MONTH

## A List of Doctoral Theses Accepted by Indian Universities.

### BIOLOGICAL SCIENCES

#### Biochemistry

1. Amala Reddy, P. Calcium related subcellular changes in muscle from Duchenne muscular dystrophy. Osmania.

2. Bandyopadhyay, Ratna. Studies on some regulatory aspects of alanine amino transferase. Calcutta.

3. Chakrabarti, Minu. Studies on the production of a new antifungal antibiotic from *Straptomyces kanamyceticus*. Calcutta.

4. Jadhao, Suresh Nagesh. Effect of indigenous preparations on certain amino acids in relation to diabetic condition. Nagpur. Dr. (Mrs) I. Vaishwanar, Department of Biochemistry, Govt. Medical College, Nagpur.

5. Misra, Sanjay. Studies on some biochemical aspects of human placental and fetal tissues during intruterine development. Calcutta.

6. Prasad, V.V.T.S. Studies on gongliosides in the rat CNS with reference to maternal alcohol consumption and under-nutrition. Baroda.

#### Microbiology

1. Chakrabarti, Anubha. A comparative study of phage typing and bacteriocin typing of *Staphylococcus* from practical point of view. Calcutta.

2. Laxminarayan, Girish. Production of some fruit flavour and flower aroma by microorganisms. Nagpur. Dr. K.V. Shankhapal, Department of Biochemistry and Microbiology, Nagpur University, Nagpur.

3. Parmod Kumar. Immunobiological properties of manno-phosphoinositides of *Mycobacteria*. Panjab.

4. Thilaga, A. Growth and survival of *Streptococcus* in artificial diet. Madurai.

#### Botany

1. Biswas, Ibha. Effects of extracts of *Croton bonplandianum* on growth performance and reproductive activity of plants. Calcutta.

2. Das, Tapas Kr. Penicillin resistance in naturally occurring bacteria and studies on DNA-mediated transfer of resistance and a stable L-form of *Rhodococcus*. Burdwan. Prof. Ajit Kr. Banerjee, Department of Botany, University of Burdwan, Burdwan.

3. Datta, Birendra Kishor. Studies on Indian marine algae. Bhavnagar. Dr. V.D. Chauhan.

4. Jain, Nirmala. Studies on the yellows type diseases of some ornamental plants and related weed species. Rajasthan. Dr. S. Misra, Department of Botany, University of Rajasthan, Jaipur.

5. Jyothi, Pudi Venkata. *Pollination ecology of some tropical tree species*. Andhra.

6. Krishan Kumar. *Yellows type disease of Modogosear Periwinkle, Catharanthus roses (L) Don*. Rajasthan. Dr. S. Misra, Department of Botany, University of Rajasthan, Jaipur.

7. Krishna Murti. *Flora of Bilaspur District*. Calcutta.

8. Rawat, Amita. *An ecological study of some agricultural weed plants in Bundelkhand region*. HS Gour. Prof. G.P. Mishra, Department of Botany, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

9. Ray Choudhuri, Somnath. *Physiological and biochemical responses of jute to water deficit stress*. Burdwan. Prof. Monojit Acharya Choudhuri, Department of Botany, University of Burdwan, Burdwan.

10. Sengupta, Jayanti. *Analysis of chromosomes invitro systems and chemical contents of some active sapogenin yielding species*. Calcutta.

11. Sharma, Gyan Prakash. *Morphological, cultural and taxonomic studies of some Ascomycetes fungi of Bikaner District, Western Rajasthan, with special reference to Locuto ascomycetes on Calligonum polygonoides L*. Rajasthan. Dr. P. N. Mathur, Hon Director, The Geastrum, Sonhan-Sajjan Bhawan, Rani Bazar, Bikaner.

12. Sharma, Subodh Kumar. *Studies on orchids of North East India: Metabolism and growth factor requirements of seed germination*. NEHU. Dr. P. Tandon, Reader, Department of Botany, North Eastern Hill University, Shillong and Dr. R. R. Mishra, Head, Department of Botany, North Eastern Hill University, Shillong.

13. Shukla, Awadesh Kumar. *Studies on population and activity of microorganisms associated with potato crop*. NEHU. Dr. R.R. Mishra, Prof. and Head, Department of Botany, North Eastern Hill University, Shillong and Dr. B.K. Tiwari.

14. Singh, Narendra Prasad. *Cytogenetic and mutational studies in some medicinal plants of Chotanagpur*. Ranchi.

#### Zoology

1. Alemla Ao, M. *Ecological investigations on the soil Arthropod communities with particular reference to insects of two 'JHUM' agroecosystems of Nagaland, North Eastern India*. NEHU. Dr. M.V. Reddy, Department of Zoology, Kakatiya University, Vidyaranyaपुरi, Warangal.

2. Bhatia, Naama. *Characterization of fractional mutations in Drosophila melanogaster and its implication to maternal repair*. Calcutta.

3. Choudhuri, Anupama. *Effect of some treatment of reducing agents on the metabolic status of Schizodactylus monstrosus during senescence process, with special emphasis on trophic metabolism*. Burdwan. Prof. Deb Kumar Choudhuri, Department of Zoology, University of Burdwan, Burdwan.

4. Das, Arunabha. *Investigations on the olfactory apparatus of some Indian teleosts*. Calcutta.

5. Das, Mausumi. *Dosage compensation and replication with special reference to the evolution of sex chromosomes in Drosophila*. Calcutta.

6. Dhar, Manjulika. *Studies on some physiological aspects of Phlebotomus argentipes*. Calcutta.

7. Dutta, Naren Kumar. *Biopotency of vitamin A on certain aspects of epithelial tissues and blood of fresh-water*

fish. Gauhati. Dr. U.C. Goswami, Reader, Department of Zoology, Gauhati University, Gauhati.

8. Ghosh, Alok Kumar. *Systematic study of the oribatid mites (Acari) from Nagaland, India*. Calcutta.

9. Kapania, Renu. *Catecholamines in gonadotropin release: Role of dopamine and epinephrine in sexually maturing and adult mole rats*. Delhi.

10. Pal, Uday Kr. *Studies on sporozoan (Protozoa: Apicomplexa) parasites in the birds of West Bengal*. Burdwan. Dr. Anadi Prasad Nandi, Reader, Department of Zoology, University of Burdwan, Burdwan and Dr. Durga Pada Haldar, Reader, Department of Zoology, Kalyani University, Kalyani.

11. Seetha, Sanka. *Studies on Nerita albicilla (Linnaeus), a marine gastropod of Waltair Coast with special reference of histochemistry and toxicology*. Osmania.

12. Wangdi, Tashi. *Studies on the chromosome behaviour during meiosis and the chromosome banding in some species of Heteroptera*. NBU.

#### Medical Sciences

1. Datta, Rakesh. *Biochemical and immunological studies on Non-A, Non-B Hepatitis virus*. Delhi.

2. Goutam, Rakesh. *Studies on the toxic constituents of Euphorbia Drugs*. HS Gour. Dr. D.K. Mukharya, Reader, Department of Criminology and Forensic Science, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

3. Medda, Bidyut Kumar. *Viscero vascular reflexes following distension of urinary bladder*. Calcutta.

4. Ray, Syamsundar. *Effects of precollection stimulation on Bonne Sentin characters*. Calcutta.

#### Agriculture

1. Janak Raj. *Combining ability and heterosis studies in orchard grass, Dactylis glomerata L*. HP Krishi. Dr. L.N. Singh, Prof., Department of Plant Breeding, Himachal Pradesh Krishi Vishwavidyalaya, Palampur.

2. Kar, Jayasri. *Studies on some physiological and biochemical factors accounting for genetic variation with regard to fruit yield and wilt resistance in brinjal (Solanum melongena L)*. Calcutta.

3. Parida, Gopinath. *Studies on the effect of N, P and K on the growth, yield and fruit quality of Robusta clone of Banana*. Calcutta.

4. Patil, Ekanath Nathu. *Studies on the sorghum based cropping systems with reference to fertilizer management in succeeding crops of wheat and ratoon sorghum*. MP Agri. Dr. B.A. Koregave, Prof., Department of Agronomy, College of Agriculture, Pune.

5. Thakur, Kehar Singh. *Genetic analysis of some quantitative characters in spring and winter wheat crosses, Triticum aestivum L*. HP Krishi. Dr. Tashi Dawa, Department of Plant Breeding, College of Agriculture, Palampur.

6. Ved Parkash. *Nutritional studies in grapes, Vitis vinifera L. CV. Perlette*. HAU.

#### Animal Husbandry

1. Mishra, Shiv Kumar. *Studies on the prevalence and pathology of inclusion body hepatitis in broiler chicks*. PAU.

# CLASSIFIED ADVERTISEMENTS

## THE UNIVERSITY OF BURDWAN

RAJBATI : BURDWAN  
WEST BENGAL

Advertisement No. 8/88-89

Dated 20th September, 1988

Applications in the prescribed form are invited for the post of "Registrar" in the approved scale of pay of Rs. 1500-60-1800-100 - 2000 - 125/2-2500/-. The post carries dearness and other allowances and pensionary benefits according to the Rules of the University.

### Educational Qualifications & Experience Required

#### (a) Essential

- (i) Uniformly good academic record with a B+ Master's Degree or its equivalent.
- (ii) At least 15 years' experience in Academic Institutions like University or in an Institute of higher learning of which 5 years must be in high level administration in a University or in an Institute of Post-graduate Study.
- (iii) Age not less than 40 years. Relaxable in the case of exceptionally qualified candidates.

#### (b) Desirable

- (i) A Doctorate Degree or published research work of merit  
OR
- (ii) High level administrative experience in a Government or Quasi-Government Organisation or a good background in administration and management in senior position.

The choice of the Selection Committee may not necessarily be confined to those who apply formally.

For application form and other information, please apply to the Registrar, University of Burdwan, Rajbati, Burdwan-713 104, with a self-addressed stamped (Re. 1/-) envelope (9" x 4").

Last date for submission of application with the requisite fee of Rs. 5/- is **October 15, 1988.**

**P. Banerjee**  
**REGISTRAR**

## GUJARAT AGRICULTURAL UNIVERSITY

SARDAR KRUSHINAGAR-385 506

DISTRICT : BANASKANTHA

Advertisement No. 6/88

Dated : 16-9-1988

Applications on prescribed form are invited for the following posts in the Gujarat Agricultural University. The candidates who fulfil the qualifications and desire to apply may send their application forms alongwith ten copies of authenticated bio-data to the Registrar, Gujarat Agricultural University, Sardar Krushinagar-385 506, Dist. Banaskantha.

Sr. No.	Name of Post and Pay Scale	Faculty/discipline
1.	Principal (a) Aspee College of Home Science, Sardar Krushinagar. (b) College of Agricultural Engineering & Technology, Junagadh. Pay Scale : Rs. 1500-60-1800-100-2000-125/2-2500 (likely to be revised as per Malhotra Commission) in addition to other normal allowances as per University/State Govt. Rules as well as rent free Bungalow.	Home Science  Agricultural Engineering
Qualifications required for the post of Principal are as under :		
<b>Essential</b>		
1.	Second Class Bachelor degree in the concerned faculty.	
2.	Second Class Master degree in the concerned faculty.	
3.	Ph.D. in a subject related to the concerned faculty.	
4.	At least 10 years of experience of teaching/research/extension education in the concerned faculty, out of which at least five years experience will be as a Professor or its equivalent post.	
5.	Good knowledge of the educational system prevalent in the world and familiarity with modern concept of organisation and co-ordination of the teaching/research and extension education activities.	
6.	Age : Below 55 years. Age relaxable in case of outstanding candidates and in case of person already in the employment of the University.	
2.	Professor/Research Scientists/ Extension Educationist or its equivalent posts. Pay Scale : Rs. 1500-60-1800-100-2000-125/2-2500 (likely to be revised as per Malhotra Commission) Plus other normal allowances as per University/State Govt. rules.	<p><b>A. Faculty of Agriculture</b> Agronomy, Plant Breeding and Genetics, Cytogenetics, Extension Education, Agricultural Statistics, Agricultural Economics, Agricultural Entomology, Plant Pathology.</p> <p><b>B. Faculty of Veterinary Science &amp; Animal Husbandry.</b> Veterinary Medicine, Live Stock Production and Management, Veterinary Obstetrics and Gynaecology, Veterinary Pharmacology, Veterinary Surgery, Veterinary Pathology, Veterinary Anatomy, Veterinary Microbiology.</p> <p><b>C. Faculty of Agricultural Engineering and Technology.</b> Farm power and machinery Engineering, Soil and Water Engineering, Rural Engineering.</p> <p><b>D. Faculty of Home Science</b> Foods and Nutrition, Child Development, Home Management, Textile and Clothing, Home Science Extension.</p> <p><b>E. Faculty of Dairy Science</b> Dairy Microbiology.</p>



Sr. No.	Name of Post and Pay Scale	Faculty/discipline
		F. Faculty of Basic Sciences and Humanities Management Science
		G. Fisheries disciplines (For proposed College)
		H. Forestry & Horticulture disciplines. (For proposed College)

Qualifications required for the post of Faculty for A, B, C, D, E, F, G, H above are as under :

**Essential**

1. Second Class Bachelor degree in the concerned faculty.
  2. Second Class Master degree in the concerned field.
  3. Ph.D. in a subject related to the concerned field.
  4. At least 10 years of experience of teaching/research/extension education in the field of Agriculture/Veterinary Science and Animal Husbandry/Agricultural Engineering and Technology/Home Science/Dairy Science/Basic Sciences Fisheries/Forestry, as the case may be, of which five years of experience must be in the concerned specialized subject as Associate Professor or its equivalent posts.
  5. Age : Below 55 years.
3. Associate Professor/Associate Research Scientist/Associate Extension Educationist.  
Pay Scale : Rs. 1200-50-1300-60-1600-Assessment-60-1900 (Likely to be revised as per Malhotra Commission) plus other normal allowances as per University/State Govt. rules.
- I. Faculty of Agriculture  
Agronomy, Agril. Chemistry & Soil Science, Horticulture Plant Breeding & Genetics, Agril. Entomology, Plant Pathology, Extension Education, Agril. Statistics, Plant Physiology & Ecology, Agril. Economics, Agril. Meteorology, Nematology, Cytogenetics, Agrostology.
  - II. Faculty of Veterinary Science and Animal Husbandry  
Veterinary Anatomy, Animal Physiology, Livestock Production and Management, Animal Genetics & Breeding, Veterinary Surgery, Veterinary Pathology, Veterinary Microbiology, Veterinary Pharmacology, Veterinary Medicine, Veterinary Public Health, Veterinary Clinic, Animal Nutrition, Poultry Science, Veterinary Obstetrics and Gynaecology.
  - III. Faculty of Agricultural Engineering and Technology  
Farm Machinery and Power Engineering, Soil and Water Engineering, Product Process Engineering, Rural Engineering, Electrical Engineering.
  - IV. Faculty of Home Science  
Food and Nutrition, Child Development, Home Management Textile and Clothing, Home Science Extension.
  - V. Faculty of Dairy Science  
Dairy Technology, Dairy Microbiology, Dairy Engineering, Dairy Chemistry.
  - VI. Basic Sciences and Humanities  
English, Ornithology (Zoology) Rural Sociology, Bio-Chemistry, Microbiology & Human Nutrition, Chemistry.
  - VII. Fisheries disciplines for proposed college.
  - VIII. Forestry and Horticulture disciplines for proposed college.

Qualification required for the post of faculties I to VIII above are as under :

**Essential**

1. Second Class Bachelor Degree in the concerned faculty.

2. Second Class Master Degree in the concerned field.
3. Ph.D. in a subject related to the concerned field.
4. At least 7 years of experience of teaching/research/extension education in the field of Agriculture/Veterinary Science & Animal Husbandry/Agricultural Engineering/Home Science/Dairy Science/Basic Science and Humanities/Fisheries/Forestry as the case may be, of which three years of experience must be in the field of concerned specialized subject as Associate Professor or its equivalent post.

5. Age : Below 55 years.

Note : 1. Notwithstanding anything contained in the above rules of qualifications for the posts of Principal, Professor or Associate Professor or its equivalent posts, relaxation in individual case in respect of degree or class of degrees, experience and age etc. will be considered by the Board of Management on the recommendation of the Selection Committee for the concerned post.

2. Gujarat Agricultural University Employee who has completed his post graduate requirements and submitted his Ph.D. thesis can also apply for the concerned post.

**Instructions**

1. Application forms and other terms and conditions can be had from the Registrar, Gujarat Agricultural University, Sardar Krushinagar-385 506. Dist. Banaskantha, on cash payment of Rs. 2/- (Money Order will not be accepted) or by sending crossed Indian Postal Order of equal values issued in the favour of "Comptroller, Gujarat Agricultural University" alongwith the self-addressed envelope (23 cm x 21/2 cm) affixed with 2.20 paise postage stamps.

2. The application duly completed in all respects with application fees of Rs. 50/- in the form of IPO drawn in favour of "Comptroller, Gujarat Agricultural University, "should reach to the Registrar, at above address on or before 26-12-1988 invariably through proper channel.

3. The candidates already in the service of this University have to apply through their respective office in the prescribed form with ten copies of the authenticated bio-data without IPO.

4. All the candidates should send their application through proper channel.

5. All the candidates called for interview will have to attend the interview at their own cost.

6. Incomplete application will not be considered.

7. The University reserve their full rights to fill up or not to fill up any or all the posts and to give or not to give appointment to the candidates selected by the Selection Committee.

8. Canvassing in any form will completely disqualify a candidate.

9. Selected candidates for the above posts or category shall be posted at any campus or centre of the University and between education, research and extension education activities/projects. Outside candidate will have to resign from the previous employment. There will be two years of probation for all the selected candidates and will be appointed under written contract.

10. The candidates who have applied earlier in response to our previous advertisements will have to reapply for this advertisement for all the posts.

**R.J. Patel**  
**REGISTRAR**

### **AMRAVATI UNIVERSITY** **EMPLOYMENT NOTICE**

No. AU-104/F/1767/88

Dated : 21st Sept., 1988

Applications are invited for the following posts:

1. Reader - Applied Electronics—1  
Rs. 1200-1900+usual allowances

2. Lecturer—Computer Science—2  
Rs. 700-1600+usual allowances

3. Programmer in Computer Unit—1  
Rs. 680-1250+usual allowances.

Prescribed application form (along with 8 copies of summary sheets) with details of qualification, specialisation required, will be supplied on payment of Rs. 10/- (Non-Refundable) by Bank Draft payable to the undersigned along with a self-addressed envelope (12 x 5 cms.) affixing postal stamps worth Rs. 3.50. Last date of receipt of prescribed application forms is 30-10-88.

**REGISTRAR**

### **ADVERTISEMENT**

Applications are invited for the Post of Senior Technical Assistant (Instrumentation) in the Department of Botany under Departmental Research Support Programme sanctioned by University Grants Commission.

**Educational Qualifications :** Degree/Diploma in Instrumentation with an experience of handling and repairing of instruments used in Biological Research or M.Sc. Physics (high 11th Class) with specialisation in Electronics.

The application on plain paper stating qualifications, experience etc., may be submitted to the Head, Department of Botany, NEHU, Shillong-793014 within 3 (three) weeks of the advertisement.

### **CENTRAL GLASS & CERAMIC** **RESEARCH INSTITUTE**

P.O. JADAVPUR UNIVERSITY  
CALCUTTA-700 032

Advertisement No. 2/88 (CGCRI)

Applications are invited from Indian Nationals for the following posts :

#### **1. Scientist—B—2 Posts**

(Pay-Scale : Rs. 2200-75-2800-EB-100-4000/-).

(Total emoluments at the minimum of the pay-scale will be Rs. 3146.00 p.m.)

#### **1st Post**

#### **Qualifications & Experience**

1st Class Post-graduate in Solid State Physics/Materials Science / Chemistry (Solid State/Physical/Polymer) preferably with adequate research experience or Ph.D. in any of the above areas or M. Tech./1st Class B. Tech. in Materials Science.

#### **Job requirements**

Development of special fabrication techniques for ceramic materials and study of their electrical/magnetic properties.

#### **2nd Post**

#### **Qualifications and Experience**

1st Class Post-Graduate in Chemistry

(Physical/Inorganic)/Physics or M. Tech./1st Class B. Tech. in Silicate Technology or Ph.D. in any of the above areas preferably with 3-5 years' practical experience in glass melting operation and quality control.

#### **Job requirements**

Developmental work related to Optical Glass Technology.

#### **2. Technical Officer—B—1 Post**

(Pay Scale : Rs. 2200-75-2800-EB-100-4000/-)

(Total emoluments at the minimum of the pay-scale will be Rs. 3146.00 p.m.)

#### **Qualifications and Experience**

Post-graduate or B.Tech. in Geology/Materials Science/Ceramic Science with 4-6 years' experience or B. Sc. Diploma in Engg./Technology of 3 years' duration plus 8-10 years' experience in the studies of ceramic, refractory and glass materials under polarising metallurgical microscope.

#### **Job requirements**

To undertake work in the preparation and characterization of ceramic and allied materials.

#### **Reservation**

Set. 'B' (i) One post exclusively for SC;

(ii) One post for SC but ST and general category candidates may also apply.

Technical Officer 'B'—For SC but general category candidates may also apply.

#### **General Conditions**

1. The posts carry usual allowances as admissible to Central Government employees of the same status stationed in Calcutta. Higher initial start may be considered for deserving candidates.

2. A lower standard for suitability consistent with efficiency will be applicable to the Scheduled Caste/Scheduled Tribe candidates. Candidates belonging to

these communities should invariably enclose an attested copy of the Caste Certificate issued by the competent authority with their applications, failing which they will not be entitled to the concession otherwise admissible.

3. The application forms may be obtained from the Controller of Administration, Central Glass & Ceramic Research Institute, 196 Raja S. C. Mullick Road, Calcutta-700 032, P.O. Jadavpur University by sending a self-addressed envelope of 23 x 10 cms. size and postage stamp worth Rs. 0.90 on or before 25th October, 1988. Applications duly completed (supported by attested copies of all the certificates and testimonials) along with non-refundable fee of Rs. 8.00 (Scheduled Caste/Scheduled Tribe candidates are exempted from paying any fee) in the form of Crossed Indian Postal Order drawn in favour of "Central Glass & Ceramic Research Institute" should be sent so as to reach this office on or before 28th November, 1988.

4. Candidates called for interview for the above posts will be eligible for single second class rail fare to & fro from the place of undertaking journey or from the normal place of residence of the candidates whichever is less on production of valid documents as required with the claim on completion of journey.

5. Candidates working in Govt. Organisations / Public Sector Undertakings should forward their applications through proper channel.

6. Applications received after the last date viz. 28th November, 1988 will not be entertained.

7. Advertisement Number and Post applied for should be clearly indicated at the top of the application and on the envelope.

8. Incomplete applications are liable to be summarily rejected.

9. Since it is not possible to call all the eligible candidates for interview, the applicants will be short-

listed for the purpose and the decision of the Institute will be final in this regard.

10. Canvassing in any form and/or bringing in any influence, political or otherwise will be treated as disqualification for the post.

"Interim Enquiries will not be attended to"

**DR. YASHWANT SINGH  
PARMAR  
UNIVERSITY OF  
HORTICULTURE AND  
FORESTRY, SOLAN**

Establishment Branch  
**CORRIGENDUM**

Ref: Adv. No. 2/88 for various posts published in *The University News* on 29-8-1988.

The last date for the receipt of application forms is extended upto 15-10-1988 for candidates within India and 25-10-1988 for candidates applying from abroad.

B.S. Nainta  
REGISTRAR

**GURU GHASIDAS UNIVERSITY,**

ITI Barracks, Koni  
BILASPUR, M.P.

Advertisement No. 5624/ESTT/UTD-88  
Dated: 20-9-88

Applications in the prescribed forms are invited for the following posts in the University Teaching Departments so as to reach the undersigned on or before Twenty Fifth October, 1988.

1. Political Science : One Professor
2. Social Anthropology & Tribal Development : One Professor  
One Lecturer in Social Culture  
One Lecturer in Social Anthropology
3. Hindi : One Lecturer
4. Language & Tribal Dialects : One Lecturer in English.
5. Business Economics : One Professor. One Lecturer.

The post of Lecturer in Social Anthropology, Hindi, English, and Business Economics are reserved for SC/ST candidates.

3. Pay Scale : (1) Professor 1500-2500  
(2) Lecturer 700-1600 (Likely to be revised)

4. Qualification

(a) Essential for all Posts : As prescribed by the University Grants Commission, New Delhi for the post of Professor and Lecturer.

(b) Desirable

**For Professor in Political Science**

Preference shall be given to candidates having specialization in or having experience of research and studies in the field or weaker section of society particularly Tribals, Harijans and Women, and in rural development.

**For Professor in Social Anthropology & Tribal Development**

He must have worked in Tribal Development field.

**For Lecturer in Social Anthropology & Social Culture**

Specialization in Social Anthropology and/or in culture with at least 5 years experience in the field.

**For Lecturer in English**

He must have specialization in Methodology of teaching English.

**For Professor & Lecturer in Business Economics**

Preference shall be given to candidates specialised in or having experience of research and studies in the field of weaker section of society particularly tribals, Harijans and Women, and in rural development/and or background of Industrial relation & management.

5. No. T.A./D.A. will be admissible to the candidate if called for interview. The Selection Committee may consider the case of an eminent/suitable person in absentia.

6. Applicants who are in the employment of Govt./Semi Govt. Organisation/Educational Institute or of any Govt. Undertaking must send their applications through proper channel but advance copy should reach in time.

7. Application forms can be obtained from the University Office on payment of Rs. 5/- or by making a written request by post to the Registrar accompanied by a Crossed Postal Order of Rs. 10/- drawn in favour of the Registrar, Guru Ghasidas University, Bilaspur.

8. Those candidates who had applied in response to our advertisements dated 21st January, 8th February, 28th April and 27th July, 1988 respectively need not apply again.

9. The University reserves the right not to fill up the posts.

R.C. Parmar  
REGISTRAR

# UNIVERSITY OF DELHI

No. Etab. IV/116/88

Dated the 21st September, 1988

Applications in the prescribed form are invited for the following posts :

S. No.	Department/ Centre	Post	No. of Vacancies	Special/Desirable Qualifications (if any)
1.	Botany	Technical Assistant	* One (Temp.-upto 1991 for the present)	Atleast 2 years experience of handling and maintenance (including repairs) of Electronic Equipment/Instruments.
2.	Central Office (Finance Wing)	System Analyst cum-Senior Programmer	One	(a) Experience of participation in training programmes in Computer related disciplines. (b) Intensive experience in system programming on a Third Generation Computer System.
	Central Office	Junior Receptionist	One	—
3.	Computer Centre	Key Punch Operator	* Two (One for Exam. Branch) (One for S.T. candidate and One Unreserved)	—
		Console Operator	* Six (ST-1, SC-2, Ex-Serviceman-1 and Unreserved-2)	—
4.	Hindi Medium Implementation	Assistant Director	Three (One for History & Pol. Science, One for Economics & Commerce One for candidates with experience in teaching Translation & Book-publishing Courses).	—
5.	Management Studies	Placement Adviser	One	A person having Industrial background or the knowledge of working of private and/or public undertakings or educational institutions with special reference to placement and training work will be given preference.
6.	Physics & Astrophysics	Instrument Mechanic	* One (Reserved for ST candidate)	—
		Workshop Male	* One (Reserved for S.C. candidate)	Should have worked in Workshop.
7.	Social Work	Social Worker in the Gram Mahila Kendra	* One	Experience in Social Work practice for one year. Proficiency in Hindi.
8.	Delhi University Sports Council	Assistant Director of Physical Education (Female)	One	—
9.	University Science Instrumentation Centre	Senior Technical Assistant	* Five (One each for ESR, NMR, Laser Raman Spectrometer, Scintillation Counter and X-Ray Spectrometer Operator)	—
		Attendant	* One (reserved for S.C. candidate)	—
10.	W.U.S. Health Centre	Medical Officer Part-time Dentist	Two (for VII Plan period) One (Temp. for 3 years)	Hospital experience after Post-graduate Degree or Diploma.

Scales of Pay for the Posts are :

System Analyst-cum-Senior Programmer/Placement Adviser—Rs. 1200-50-1300-60-1900 (Pre-revised).

Medical Officer—Rs. 2200-75-2800-100-4000 plus N.P.A.

Asstt. Director of Physical Education (Female)/Asstt. Director Hindi Medium Implementation—Rs. 700-40-1100-50-1600 (Pre-revised).

Part-time Dentist—Rs. 600/- p.m. fixed for visiting the Health Centre three times in a week for 2½ hours in each visit.

Sr. Technical Asstt./Console Operator/Social Worker—Rs. 1640-60-2600-EB-75-2900.

Technical Assistant/Instrument Mechanic—Rs. 1400-40-1800-EB-50-2300.

Junior Receptionist—Rs. 950-20-1150-EB-25-1500.

Key Punch Operator—Rs. 975-25-1150-EB-30-1540.

Attendant/Workshop Mate—Rs. 800-15-1010-EB-20-1150.

All posts except Part-time Dentist carry D.A., C.C.A. and H.R.A. etc. as admissible under the rules in force in the University from time to time.

## Essential Qualifications

### System Analyst-cum-Senior Programmer

- Atleast a second class (not less than 50% marks in the aggregate) Master's degree in Maths. or Statistics or Econometrics or Operational Research or Physics or atleast second class (not less than 50% marks in the aggregate) Bachelor's degree in Engineering from a recognised institution; and
- (i) Atleast 5 years' experience in Computer Programming at a recognised institution; and  
(ii) Knowledge of atleast one of the high level languages like Fortran, Cobol, Algol, PL/I- extensive experience of developing programmes for complex problems.

OR

A Ph.D. Degree from a recognised institution in Computer related disciplines like system programming, numerical analysis, artificial intelligence, Theory of Computability & Theory of formal languages.



### Placement Adviser

Master's Degree in Business Management, Engineering, Technology, Arts, Science or in any discipline of Social Sciences, such as Sociology, Economics, Commerce, Psychology, Social Work, etc. with familiarity in Business Management and/or Personnel Management.

### Assistant Director (Hind Medium Implementation)

(a) A Ph.D./M.Phil. degree or research work of an equally high standard; and

(b) Good academic record with at least second class (C in the seven point scale) Master's degree in Hindi or in any one of the major social sciences subjects viz. Political Science, History, Economics and Commerce with sound knowledge of Hindi and English, from an Indian University or an equivalent degree from a foreign University.

(c) Proficiency in translation from English to Hindi. Editing and vetting with evidence in the form of published work and/or articles of recognised merit.

Provided that if the Selection Committee is of the view the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax the requirement of at least second class in Master's degree examination in terms of level achieved at the said examination as prescribed in (b) above.

Provided further that if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable, a person possessing a good academic record (weightage being given to M.Phil. or equivalent degree or research work of quality) may be appointed.

### Assistant Director of Physical Education (Female)

(i) A Master's degree in Physical Education (High Second Class) with Diploma in Sports coaching from a recognised Institution.

OR

A Master's degree in Physical Education (High Second Class) with a record of having represen-

ted his University at the Inter University level/State in the National Championship.

(ii) Experience in organising games and sports (as exemplified in handling of about half a dozen teams in a year in his Institution and their participation in University/Inter-Collegiate Tournaments) and ability to encourage mass participation in games and sports.

### Medical Officer

MBBS Degree from a recognised University. 3 years' experience after passing MBBS required. Candidates with post-graduate qualifications or hospital experience will be preferred.

### Part-Time Dentist

Post-graduate degree or equivalent, qualification from a recognised Institution with 5 years' experience after Post-graduate degree. In those disciplines where Post-graduate degree holders are not ordinarily available, P.G. Diploma or equivalent qualification from a recognised institution with 5 years' experience after Post-graduate Diploma.

### Social Worker (Gram Mahila Kendra)

Post-graduate degree in Social Work in second division from a recognised University.

### Senior Technical Assistant (ESR Operator)

@ M.Sc. in Physics or Chemistry having two years' experience of operating ESR or similar instruments.

OR

Post B.Sc. Diploma in Electronics Instrumentation with 3 years' experience in operation or maintenance of ESR or NMR.

### Senior Technical Assistant (NMR Operator)

@ M.Sc. in Chemistry having two years' experience of operating NMR or ESR or similar equipment.

OR

Post B.Sc. Diploma in Electronics Instrumentation with 3 years' experience in operation or maintenance of NMR or ESR or similar instruments.

### Senior Technical Assistant (Operator for Laser Raman Spectrometer)

@ M.Sc. in Physics having 2 years' experience of operating IR or Raman Spectrometer or similar instruments.

OR

Post B.Sc. Diploma in Electronics Instrumentation with 3 years' experience in operating IR or Raman Spectrometer.

### Senior Technical Assistant (Operator for Scintillation Counter)

@ M.Sc. in Physics with 2 years' experience of operating Scintillation counters or having done isotopic work using other related instruments.

OR

Post B.Sc. Diploma in Electronics Instrumentation with 3 years' experience of operating Scintillation Counters or instruments related with isotopic work.

### Senior Technical Assistant (Operator for X-ray Spectrometer)

@ M.Sc. in Physics having 2 years' experience of X-Ray Diffraction or any other X-Ray equipment.

OR

Post B.Sc. Diploma in Electronics Instrumentation with 3 years' experience in X-Ray equipment.

@ Note : With reference to the duration of experience, time spent for acquiring any additional training or degree in instrumentation will be accounted in lieu of experience.

### Instrument Mechanic

Must of thoroughly conversant with all types of Lathe Work, Facing, Surfacing, Turning, Multiple Screw cutting (including various forms of screw threads), Tape & Curved Turning etc. Should be able to work on other workshop machines like Shaper-milling and drilling etc. Ability of repair Laboratory instruments like Galvanometres, Stop Clocks and Watches, desirable.

### Workshop Mate

Should have passed Matric or an equivalent examination with Science.

#### Technical Assistant

Graduate in Science.

**Note :** The qualifications can be relaxed in the case of suitably experienced candidate.

#### Junior Receptionist

At least a Graduate. Should be of very polite temperament and well mannered.

#### Console Operator

- (i) At least Second Class (not less than 50% marks in the aggregate) Master's degree in Maths., Statistics, Econometrics, Operational Research or Physics.

OR

- At least Second Class (not less than 50% marks in the aggregate) Bachelor's degree in Engineering from a recognised institution, and  
(ii) Familiarity with console operation.

#### Key Punch Operator

Higher Secondary/Matriculation. Experience in operating Electric Key Punching Machine (Numerical and Alphanumeric) and knowledge of handling Computer input/output work.

#### Attendant

VIII Class Pass with atleast 3 years experience in repair / maintenance of Airconditioners and Refrigerators.

The prescribed application forms can be had from Room No. 205, Estab. IV Section, Administrative Block of the University either personally or by sending a self addressed envelope (size 13 cm x 28 cm) with postage stamps worth Rs. 6/-.

The candidates will have to produce original documents relating to their age, qualifications, experience etc. at the time of interview.

Persons already in service in a Government / Semi - Government / Government Aided Organisation should apply through proper channel.

Applications (separate for each-post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles etc. should be addressed to the Registrar. However, applications for the posts marked asterisk (\*) should be sent directly to the Head of the Department concerned. The last date prescribed for receipt of applications is 21st October, 1988.

**Note :** 1. Canvassing in any form by or on behalf of the candidate will disqualify.

2. The University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

**Madan Mohan  
REGISTRAR**

## Experts Wanted in Various Academic Fields

Ministry of Human Resource Development (Department of Education) administers the Scholarships in various academic and professional fields. These scholarships are offered either by the Government of India or by foreign Governments. To shortlist and interview the candidates for these scholarships, Selection Committees are constituted in respect of each scheme and country. In these Selection Committees experts in the various subject fields are also nominated as Members. TA/DA will be paid to these Experts as per Government Rules whenever their services are requisitioned. The subjects in which these scholarships are offered are normally in the fields of Engineering and Technology; Physical and Natural Sciences; Humanities and Social Sciences; Agriculture; Animal Husbandry and Veterinary Sciences; Fine Arts; Language and Literature of different countries which offer the Scholarships/Fellowships.

The Ministry invites the bio-data of Experts who might like to be put on the panels for constitution of the Selection Committees. These experts should be of the rank of a Professor in a University and should have sufficient teaching and research experience. Interested persons are requested to send their bio-data with details in the following format :

- (i) Name
- (ii) Present position held
- (iii) Precise field of Specialisation
- (iv) Academic and Professional Qualifications
- (v) Number of years of teaching experience in the field of specialisation
- (vi) Number of years of research experience
- (vii) Official contact address
- (viii) Residential address
- (ix) Telephone Numbers both office and residence
- (x) Telegraphic address
- (xi) Telex number (if any)

Experts of the rank of Professor may kindly send their applications through the Registrar or the Head of their Organisation/Institution to Deputy Educational Adviser, National Scholarship Division, Ministry of Human Resource Development, Department of Education, Shastri Bhavan, New Delhi. Applications for empanelment will be received upto end of October, 1988.

dnvp 88/356

# ALIGARH MUSLIM UNIVERSITY

## ALIGARH

Admission Notice No. XIII

Session—1988-89

Applications are invited from eligible candidates for admission to M.Phil./Ph.D. degree courses (Batch I) during the session 1988-89 in the Departments under the following Faculties:

### 1. Faculty of Arts

Department of English/Philosophy/Linguistics/Sanskrit/Urdu/Hindi/Arabic/Modern Indian Languages.

### 2. Faculty of Social Sciences

Department of Economics/Education/History/Political Science/Psychology/Sociology/West Asian Studies/Islamic Studies.

### 3. Faculty of Science

Department of Chemistry/Geography/Geology/Statistics/Mathematics/Physics.

### 4. Faculty of Life Sciences

Department of Biochemistry/Botany/Zoology/Centre of Wild Life & Ornithology.

### 5. Faculty of Commerce

Department of Commerce Business Administration.

### 6. Faculty of Medicine

Department of Anatomy/Biochemistry/Microbiology/Pharmacology.

### 7. Faculty of Engg. & Technology

Department of Civil/Electrical/Electronics/Mechanical/Chemical Engineering/Applied Physics/Applied Chemistry/Applied Mathematics.

### 8. Faculty of Law

Department of Law

### 9. Faculty of Theology

Department of Sunni Shia Theology.

### 10. Interdisciplinary Biotechnology Unit

### Eligibility Requirements

Master's degree (M.A., M.Sc., M.Com., M.Ed., M.Th., LL.M. etc.) from this University or an equivalent examination recognised by this University with not less than 50% marks or equivalent grade, in a subject relevant to the field of research, subject to any further requirements for eligibility laid down by the Boards of Studies/C.A.S.R. concerned from time to time.

### How to Apply

The prescribed application form may be obtained from the Deputy Controller (Admissions), Post Box No. 52, Aligarh Muslim University, Aligarh-202001, on requisition either in cash or through crossed Indian Postal Order worth Rs. 5/- payable to the Finance Officer,

A.M.U., Aligarh. If the form is required to be sent through ordinary post, a self-addressed envelope of (9" x 6" in size, affixing stamps worth Rs. 5/40, may be sent along with the requisition. In case the form is desired to be sent through registered post, stamps worth Rs. 9/- may be affixed on the self-addressed envelope.

Applications, complete in all respect, supported by the relevant documents, along with a registration fee of Rs. 5/- (non-refundable) through crossed Indian Postal Order payable to the Finance Officer, A.M.U. Aligarh, should reach the Deputy Controller (Admissions), Post Box No. 52, Aligarh Muslim University, Aligarh 202001 on or before 18-10-1988.

Incomplete applications or those received after the expiry of the last date shall not be accepted, and no further correspondence will be entertained in this respect.

Candidates selected for admission will be intimated of the date for completion of admission.

N. Moldeen

CONTROLLER OF EXAMS.  
& ADMISSIONS

## DAYALBAGH EDUCATIONAL INSTITUTE (Deemed University)

DAYALBAGH, AGRA-282 005

Applications are invited in the prescribed form for the following posts:

1. Readers: (3700-5300) one each in:

- (a) Botany (Plant Physiology/Biochemistry/Ecophysiology)
- (b) Hindi
- (c) Sanskrit

2. Lecturers: (700-1600\*, 2200-4000) in:

- (a) Mathematics (Pure Maths/Computer Sc. & Applns.)—3
- (b) Electrical Engineering—3
- (c) Computer Science & Applications—2
- (d) Computer Aided Design—1 (upto March 1990)

3. Teaching Assistant (1000/- fixed, for graduates in Engg. with at least 70% marks or 1100/- fixed, for postgraduates in Engg. with I div)—2 (Mech.—1, Elect.—1).

### Minimum Qualifications

1. Good academic record with a doctoral degree or equivalent published work and 5 yrs. exp. of teaching and/or research provided that at least 3 of these yrs. were as Lecturer or in an equivalent position.

2. (a) Doctorate with good academic record with II Class Master's degree. If candidates with doctorate degree are not available or not found suitable, persons with at least 2 years research exp. may be considered. Those possessing M. Tech. in Computer Science or MCA (3 years) may also apply.

(b) Master's degree in Elect Engg. with I Class at Bachelor's/Master's level and 1 year professional exp. Fresh Engg. graduates with I Class may also apply.

(c) Master's degree in Computer Sc. or Electronic or Elect Engg. with Computer Application based project work/MCA (3 years) with 2 years relevant exp./Master's degree in a related area other than Engg. with 3 years exp.

(d) Master's degree in Elect or Mech. Engg. or Computer Science with I div. at Bachelor's/Master's level. Candidates with 1 year relevant exp. outside academic/research institute will be preferred. Knowledge of 3 high level languages and use of Computer systems in design, manufacture, data processing and management is desirable.

3. Engg. degree with above 70% marks or I div. Master's degree.

Note: 1. Prescribed application forms along with detailed information can be had from the office of the Registrar of the Institute on payment of Rs. 10/- for posts from Sl. No. 1 to 3 and Rs. 5/- for the other posts by cash at counter or by sending a bank draft of the required amount accompanied by a self-addressed and stamped envelope of the size 22 x 10 cm with stamps worth Re. 1/- for ordinary post or Rs. 6/- for regd. post.

2. Applications complete in all respect along with enclosures and registration fee of Rs. 10/- for posts from Sl. No. 1 to 3 and Rs. 5/- for other posts should reach the Registrar of the Institute latest by 15 Nov. 1988. All payments be made either by cash at counter or by bank draft in favour of 'DAYALBAGH EDUCATIONAL INSTITUTE' payable at Agra.

3. Separate application be made for each post.

4. Superannuated persons are not eligible for employment.

REGISTRAR



